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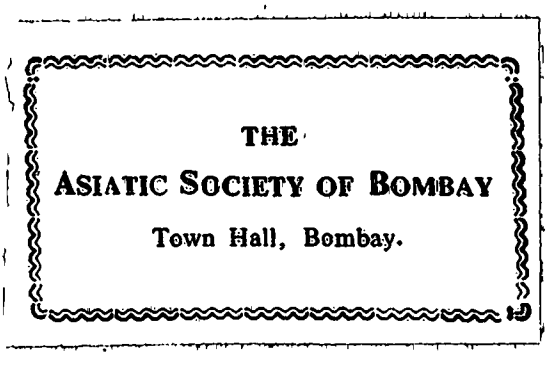

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GOVERNMENT OF INDIA

DEPARTMENT OF COMMERCE

REPORT OF THE INDIAN TARIFF BOARD

ON THE

CHLOROFORM, POTASSIUM PERMANGANATE, AND ETHER SULPHURIC P. B. AND ANAESTHETIC INDUSTRIES

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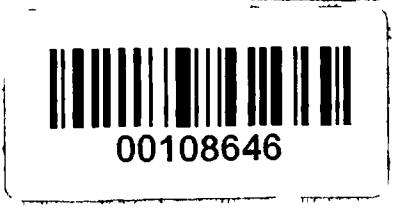

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REPORT ON (a) CHLOROFORM, (b) POTASSIUM PERMANGANATE, AND (c) ETHER SULPHURIC P.B. AND ANAESTHETIC INDUSTRIES.

INTRODUCTORY.

Application for protection.

1. An application for protection to these industries was submitted to the Commerce Department, Government of India, by the Bengal Chemical and Pharmaceutical Works Ltd., Calcutta, on the 14th January 1946. Subsequently, they withdrew their application relating to chloroform in their letter dated the 16th September 1946, but at the public inquiry they requested that the case of chloroform may also be considered along with the other two chemicals. In addition, Chemicals Ltd., Nidadavolu, had also applied for protection to the potassium permanganate industry in their letter dated the 5th December 1945 addressed to Government. They, however, did not send any representative to the public inquiry.

Reference to the Board.

2. The case of these three industries was referred to the Board for investigation into their claim for protection or assistance in the Government of India, Department of Commerce, Resolution No. 218-T(55)/45, dated the 4th May 1946.

Terms of reference.

3. The terms of reference to the Board, which are stated in the Resolution of the Government of India, Department of Commerce, No. 218-T(55)/45, dated the 3rd November 1945, are as follows :—

"In the case of each industry the Board will, after such examination as it considers necessary, report whether the industry satisfies the following conditions :—

(1) that it is established and conducted on sound business lines ;

(2) (*a*) that, having regard to the natural or economic advantages enjoyed by the industry and its actual or probable costs, it is likely within a reasonable time to develop sufficiently to be able to carry on successfully without protection or State assistance ; or

(*b*) that it is an industry to which it is desirable in the national interest to grant protection or assistance and that the probable cost of such protection or assistance to the community is not excessive.

Where a claim to protection or assistance is found to be established *i.e.*, if condition (1) and condition (2) (*a*) or (*b*) are satisfied, the Board will recommend—

(*i*) whether, at what rate and in respect of what articles, or class or description of articles, a protective duty should be imposed ;

(*ii*) what additional or alternative measures should be taken to protect or assist the industry ; and

(*iii*) for what period, not exceeding three years, the tariff, or other measures recommended should remain in force.

In making its recommendations, the Board will give due weight to the interests of the consumer in the light of the prevailing conditions and also consider how the recommendations affect industries using the articles in respect of which protection is to be granted. Since relief, to be effective, should be afforded without delay, the Board is requested to complete its enquiries with all possible expedition and to submit a report as soon as the investigation of the claim of each industry is concluded."

Method of inquiry.

4. After these industries were referred to the Board, a short preliminary questionnaire was sent to the known manufacturers and the Industries Department of the Government of India and the Provincial and State Governments, requesting them to furnish information regarding the installed capacity and actual production of the factories, the import of these chemicals from different countries in recent years, the existing import duties, etc. Valuable information, especially from the Industries Department of the Central Government, was received in response to this preliminary questionnaire. This preliminary questionnaire was followed by a detailed questionnaire, which was sent to a number of manufacturers, importers, and consumers, as well as certain associations representing chemical manufacturers' interests. A list of the firms or persons to whom the detailed questionnaire was issued is given in Appendix I. Since many of the manufacturers and the consumers were common for the three industries, it was decided to take them up for consideration at the same public inquiry. For the same reason, the Appendix I is common for the three industries, but it has been so arranged as to bring out for each industry the names of firms and organizations to whom the questionnaire was sent.

5. The Cost Accounts Officer deputed by the Board examined the costs of production of the Bengal Chemical and Pharmaceutical Works, Ltd., for chloroform, ether sulphuric P. B. and anaesthetic, and potassium permanganate. He also examined the costs of production of ether sulphuric P. B. and anaesthetic at the Alembic Chemical Works, Baroda.

6. The section of the factory of the Bengal Chemical and Pharmaceutical Works, Ltd., in which chloroform and potassium permanganate are manufactured, was visited by Dr. Nazir Ahmad on the 12th April 1946. He also visited the factory of the Indian Chemical Manufacturers, Ltd., Lahore, engaged in the production of potassium permanganate, on the 27th December 1946. The public inquiry into these three industries was held at Bombay on the 17th and 18th December 1946. A list of the persons representing firms, organizations and consumers' interests, who attended this inquiry, is given in Appendix II.

7. We shall now take up the case of each industry separately in three parts as follows : Part I, chloroform ; Part II, potassium permanganate ; and Part III, ether sulphuric P. B. and anaesthetic.

PART I.—CHLOROFORM

History of the industry.

8. The representative of Alembic Chemical Works, Baroda, stated at the public inquiry that during 1932—1939 they had manufactured about 3,000 lbs. of chloroform per annum for their own consumption, but they did not place any of their product in the market. Thus, in the pre-war years, the production of chloroform in India was on a small scale, averaging about 3,000 lbs. per annum; while the imports were of the order of 2,50,000 lbs. per annum. In the early part of the war, there was an acute shortage of bleaching powder, which is one of the important raw materials for the manufacture of chloroform, and India was asked to step up her own production of chloroform, as it was emphasised that she was not likely to get any from foreign sources. The production capacity went up to 60,000 lbs. per annum, while the balance of our requirements were met by imports from U. K. on a monthly quota basis of about 15,000 lbs. per month.

Raw materials.

9. The two raw materials principally required in the manufacture of chloroform are bleaching powder and alcohol. It is reported that under Indian conditions at least 12 cwts. of bleaching powder and about 18 gallons of alcohol are required for the production of 100 lbs. of chloroform. Limited quantities of bleaching powder are being made in India, but they are not enough to supply the country's requirements. As a result, considerable quantities of bleaching powder have to be imported from abroad to meet the requirements of the textile, paper and other industries. In our inquiry into caustic soda and bleaching powder, we estimated that the present production of bleaching powder in India is about 4,000 tons per annum, while the present demand is about 13,600 tons per annum. As regards alcohol, this is now being manufactured in India on a fairly large scale either from molasses where sugar factories exist or from mahua flowers. It should, however, be mentioned that the price of alcohol varies considerably from one province to another, ranging from Rs. 1-8-0 to Rs. 5-8-0 per gallon. It is, therefore, not available to the different consuming industries situated in different parts of India at the same uniform price. We shall revert to this point in a later part of the report.

Process of manufacture.

10. The method employed in India consists of heating together alcohol and bleaching powder in an iron still fitted with a mechanical stirrer and with arrangements for steam heating and water cooling. Crude chloroform gradually distills over, and is collected, purified and redistilled. Calcium chloride is formed as a by product and may be recovered. Apart from this method, there are two other methods employed in other countries, namely, (1) from acetone in place of alcohol and (2) Beasson's continuous process.

Uses.

11. Chloroform is used generally as an anaesthetic and occasionally as an antiseptic in the hospitals. For this purpose, it must conform to the B. P. standards of purity. It is also used for industrial purposes as a solvent in many industries, as it readily dissolves, fats, resins, etc. It is also used in the extraction of alkaloids and as an analytical re-agent in the examination of foods and drugs.

12. Calcium chloride, which is formed as a by-product in the manufacture of chloroform, also has many industrial uses. It is used in large quantities as a refrigerating chemical; it is also used in the manufacture of cement fibre boards, for drying coal gas, as a raw material in the manufacture of barium chloride, in the leather industry, and for watering roads in solution to bind down the dust.

Imports.

13. In view of the fact that chloroform is not entered as a separate item in the Annual Statement of Sea-borne Trade, it was not possible to estimate with any degree of accuracy the quantities imported into India before the war. The position is further complicated by the fact that many chemical works which require chloroform for their own use obtained it by direct imports, and hence no records of their consumption were available with the importing firms. The opinion was expressed that before and during the war the total imports of chloroform into India were of the order of 2,50,000 lbs., out of which some 40,000 lbs. were of the anaesthetic quality required by the hospitals and the balance of the commercial quality required by industry. In view of the fact that it is desirable in the interests of industry to have more reliable data with regard to the import into, and production of this chemical in India, we recommend that it should be entered as a separate item in the Annual Statement of Sea-borne Trade and in the Statistics of Production.

Domestic demand.

14. From the evidence placed before us at the public inquiry, we estimate that the demand for this chemical during the next 2 to 3 years will be at least as much as in the pre-war years and may be even more, *i.e.*, it will not be less than 2,50,000 lbs. per annum and may possibly be 3,00,000 lbs. per annum. We were informed by the physicians present at the inquiry that the consumption of chloroform in the hospitals is about one pound per patient per annum, but that as a result of the latest developments in medical science, the use of chloroform as anaesthetic is on the decrease. According to the Bhore Committee's Report, the total number of beds in the Indian hospitals is about 74,000. We may, therefore, conclude that in the next 2 to 3 years the requirements of the anaesthetic variety for the hospitals will be of the order of 50 to 70 thousand lbs. per annum, while the demand for the commercial variety for industrial purposes will be over 2,00,000 lbs. per annum. It is quite likely that with the development of industries in India, the demand for the commercial variety may go up, and therefore decrease in the anaesthetic variety may be offset by an increase in the consumption of the commercial variety.

Domestic production.

15. The Industries and Supplies Department of the Government of India had furnished us information regarding the rated capacity of the different units in India. This, together with the information supplied by the manufacturers regarding their productive capacity and actual production, may be summarised as under :—

Name and address of the factory.	Location.	Date of commencement of production.	Annual production capacity as given by the I. & S. Department.	Actual production from Sept. '44 to Aug. '45.
			Lbs.	
Bengal Chemical & Pharmaceutical Works Ltd., Calcutta.	164 Manicktola, Main Road, Calcutta.	1939	*35,000	11,926 lbs.
				Actual production in :
				Lbs.
				1943 10,504
	"			1944 15,294
				1945 4,204
Bharat Laboratory & Chemical Works, Calcutta.	Calcutta ..	..	1,000	Not known.
Eastern Drug Co., Ltd., Calcutta.	Do. ..	..	12,000	Not known.
Mettur Chemicals, Mettur Dam	Mettur Dam ..	..	122,000	Not known.
			60,000	

* According to Messrs. Bengal Chemical & Pharmaceutical Works Ltd., their maximum capacity is 30,000 lbs.

16. On further enquiries being made, it was found that at present only the Bengal Chemical and Pharmaceutical Works Ltd., Calcutta, were engaged in the manufacture of chloroform. Even in the case of the Bengal Chemical & Pharmaceutical Works Ltd., although their rated capacity was given by them as 30,000 lbs. per annum, yet on the basis of an actual test carried out by them for 23 days and also on the basis of their peak production in 1944 when they manufactured over 15,000 lbs. in less than 9 months, their productive capacity cannot be regarded as being more than 24,000 lbs. per annum. It would, therefore, appear that the productive capacity installed at present for the manufacture of chloroform does not satisfy even 10 per cent. of the total requirements of the country. It should be noted, in this connection, that the Bengal Chemical and Pharmaceutical Works Ltd., manufacture only the B. P. quality, which is required for use in the hospitals, though, in order to manufacture it, they have first to prepare the commercial quality.

Quantity of the indigenous product.

17. The product manufactured by the Bengal Chemical & Pharmaceutical Works Ltd., conforms to the B. P. standards, and the physicians present at the inquiry testified that it came up to the required standards of purity. The complaint was made that on some occasions their chloroform, though originally up

to the standard, had deteriorated on storage. It was, however, pointed out that if chloroform is not properly stored or if it is exposed to light, it is likely to deteriorate even though originally it may conform to the highest standards of purity. Furthermore, during the war, some difficulty had been experienced in getting the right type of stoppers, but this difficulty, which relates only to chloroform used for anaesthetic purposes, does not exist now. We may, therefore, conclude that the chloroform manufactured in India satisfies the required standard of purity.

Existing duty.

18. Under the present Customs Tariff (First Schedule), the duty levied on chloroform is as follows :—

Item No.	Name of article.	Nature of duty.	Standard rate of duty.	Preferential rate of duty if the article is the produce or manufacture of.		
				The United Kingdom.	A British colony.	Burma.
28	Chemicals, Drugs, and Medicines, all sorts not otherwise specified.	Preferential revenue.	36 per cent. ad valorem.	24 per cent. ad valorem.	24 per cent. ad valorem.	12 per cent. ad valorem.

C.i.f. and landed cost.

19. As mentioned above, chloroform is available in two qualities, namely (*a*) commercial quality, which is imported in bulk in large containers and (*b*) pharmaceutical (B.P.) quality, which is used for anaesthetic and antiseptic purposes and comes in one pound bottles. It is important to bear this distinction in mind as the commercial quality is always much cheaper not only because it is less pure, but also because of the cost of the bottles. The landed cost and the selling price of chloroform of B. P. quality imported from England in 1938 was stated to be Rs. 1-13-10 and Rs. 2-5-4 respectively. It was, however, pointed out that at that time importers from Germany were selling the same quality of chloroform at a much lower price. The present c.i.f. price, landed cost and selling price of the commercial and P. B. qualities of chloroform, as given by three importing firms, are as follows :—

	1st Firm (July '46) Commercial quality.	2nd Firm (August '46) B. P. quality.	3rd Firm (1946) B. P. quality.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
C.i.f. price	1 4 5	1 15 0	1 15 8
Customs Duty	0 4 10	0 7 6	0 8 8
Clearing charges	0 0 1	0 4 0	0 1 0
	1 9 4	2 10 6	2 9 4
Selling price	1 11 7	3 5 0	4 12 0

It will be seen that so far as the commercial quality is concerned, its landed cost is Rs. 1-9-4. This was confirmed by the representative of another firm of importers, who was present at the inquiry and whose quotation from U. S. A. agreed fairly well with the price given by the first firm. So far as the B. P. quality is concerned, the landed cost as given by both the firms is about Rs. 2-10-0 per lb., though the selling price is somewhat different. Since the Bengal Chemical & Pharmaceutical Works Ltd., manufacture only the B. P. quality, we have to compare their cost of manufacture with the landed cost of the B. P. quality as given by the two importing firms. It should, however, be mentioned in this connection that it is possible to prepare the B. P. quality from the commercial quality by re-distillation and refinement and to market it after packing it in one pound bottles. It is not possible for us to give the cost of converting the commercial quality into the B. P. quality, as no reliable data was placed before us on this point.

Estimated cost of production.

20. In their reply to our questionnaire the Bengal Chemical and Pharmaceutical Works, Ltd., Calcutta, had given the following costs of manufacture for the three years 1943-45 which were based upon their actual production of the quantities mentioned against each year. They had also indicated their estimated cost for the future.

	Quantity produced. lbs.	Cost of production per lb. Rs. a. p.
1943	10,504	2 12 9
1944	15,294	3 2 3
1945	4,204	2 14 0
Future	..	2 11 0

Subsequently, they had carried out a test lasting for 23 days in which 479 lbs. of chloroform were produced, and on the basis of this test, they arrived at a figure of Rs. 3-4-4 as their cost of production of one pound of chloroform for the future (*vide* appendix III). In view of the fact that this test lasted for 23 days only when the actual quantity produced was less than 500 lbs. and also in view of the fact that the cost of production arrived at on the basis of this test exceeded their own estimated cost by 8 annas per lb., we were unable to accept the figure of Rs. 3-4-4 per lb. as being completely reliable. We felt that sufficient data was not available to draw definite conclusions as regards the cost of production of chloroform for the next 2 to 3 years. The difficulty in arriving at a reliable cost of production of chloroform was enhanced by the following factors. Chloroform is one of the many items manufactured by the Bengal Chemical and Pharmaceutical Works, Ltd., the other items covering a wide range of chemicals and toilet articles. Separate accounts are not maintained for these items, and it was extremely difficult for our Cost Accounts Officer to allocate the different items of expenditure and overheads to any one item such as chloroform. The indirect allocation of the different heads of expenditure to chloroform was not very helpful as the total capital invested for this particular item is very small and the profits earned on some of the other items are much larger than would ordinarily be allowed by the Board. In view of these difficulties, it was not possible to construct a cost sheet for chloroform, while for the reasons explained above, it was not possible for us to

accept the cost of production of Rs. 3-4-4 per lb. for the next few years. We are of the opinion that if this industry seeks protection or assistance from the State, the cost of production should be based upon a fairly large production extended over a period which can be regarded as representative, and that the accounts should be maintained in such a way that it would be easily possible to construct cost sheet in which the different heads of expenditure, including overheads, profit on fixed capital and interest on working capital are clearly shown and can be properly checked.

Measure of protection.

21. A comparison of the latest c. i. f. prices and the cost of production quoted by the Bengal Chemical and Pharmaceutical Works, Ltd., Calcutta, shows that if this industry were to be protected, it would require a protective duty of at least 60 per cent. to equalise the landed cost with the cost of production in India. The representative of the Bengal Chemical and Pharmaceutical Works, Ltd., urged at the public inquiry that a protective duty of this magnitude should be imposed in order to enable the local product to compete with the foreign imports. We are, however, unable to accept this request for the following reasons :

(*i*) One of the two raw materials, which are principally required in the manufacture of this chemical, namely bleaching powder, is not yet made in sufficiently large quantities in India. It has to be imported from abroad in order to meet the requirements of our industries, such as textile and paper. If the manufacture of chloroform is undertaken on a large scale in India, still larger quantities of bleaching powder will have to be imported from abroad until such time as India becomes self-sufficient in this respect. Furthermore, the present indications are that the manufacture of bleaching powder is more costly in India than in the foreign countries and may even require State assistance for a short period. The manufacture of chloroform, therefore, does not enjoy the natural advantage of having its raw materials available in the country at competitive prices.

(*ii*) The installed capacity in the country is hardly sufficient to meet even 10 per cent. of the total demand in the country. If a high protective duty of 60 per cent. is imposed in order to stimulate the manufacture of the limited quantity required for anaesthetic purposes, it would impose an unduly high burden on the users of the commercial quality, who constitute the bulk of the consumers and who will have to pay a much higher price than at present to meet their requirements. In view of the fact that the commercial quality is required by a large number of industries and in view of the fact that it is desirable that these industries should obtain their raw materials as cheaply as possible, we do not think it proper that a heavy duty should be imposed on this article with a view to encouraging the manufacture of the anaesthetic quality at the expense of the consumers of the commercial quality.

22. We considered the advisability of imposing an adequate protective duty on the anaesthetic quality leaving the commercial quality under a normal revenue duty, but we found that this step was not practical for the following reason. The anaesthetic and the commercial qualities are chemically the

same substance, and it is possible to manufacture the former from the latter by the simple process of redistribution and refinement. If the commercial quality were allowed to be imported in the interests of its consuming industries under a normal revenue duty, while a heavy protective duty was imposed upon the anaesthetic quality, apart from the administrative difficulties involved in assessing these different duties, it would be possible for any manufacturer in India to import the commercial quality and prepare from it the anaesthetic quality by refining it. If the manufacture of the anaesthetic quality is to be carried on from the imported commercial quality, then it will not be worth while to protect the anaesthetic quality.

23. We were also asked to consider, as an alternative to a protective duty, the possibility of assisting the indigenous industry by giving a subsidy to the manufacturers which would be equal to the difference in the price of bleaching powder in India and England. We were informed that the British manufacturers of chloroform were able to get their bleaching powder at about 11 sh. per cwt., which is equal to about Rs. 7-8-0 per cwt., while the Indian manufacturers had to pay about Rs. 13-8-0 per cwt. for it. Thus, the Indian manufacturers of chloroform were at a disadvantage as compared with the British manufacturers in respect of the price they paid for bleaching powder, and it was suggested to us that if this price difference could be neutralised by the grant of a subsidy equal to the difference between the price of bleaching powder in the two countries, the Indian manufacturers would be able to compete with the British manufacturers. We have carefully examined this suggestion, but find ourselves unable to accept it for the following reasons. As stated above, the quantity of bleaching powder manufactured in India at present is far short of her requirements, and it is likely that for some years to come we will have to import a substantial part of our requirements of bleaching powder from broad. Furthermore, the present indications are that the cost of manufacture of bleaching powder in India is somewhat higher than in England, and consequently if the bleaching powder industry is to be established in India, it may have to be given some form of protection or assistance by the State. It is difficult to foresee at present how long it will take India to become firstly self-sufficient in the matter of her supplies of bleaching powder and secondly when the bleaching powder manufactured in India will be able to compete with foreign imports without any State assistance. The manufacture of chloroform in India should follow in the wake of a well-established bleaching powder industry. In our opinion, therefore, it is premature to think of granting a subsidy to the chloroform industry.

24. After taking all these factors into consideration, we have come to the conclusion that as conditions exist at present, no case has been made out for any measure of protection or assistance to the manufacture of chloroform in India. If the industry is able to produce costs of manufacture based upon a fairly large production and if these costs are prepared in such a way that the different items of expenditure are based upon actuals and not allocated in an indirect manner so that they can be checked, it would be open for the industry to renew its application for protection.

PART II.—POTASSIUM PERMANGANATE.

History of the industry.

25. Potassium Permanganate was not manufactured in India until 1939-40, the total consumption previous to this period being met from imports. During the war this article was in such short supply in the United Kingdom, that for the defence requirements of India not more than 10 to 12 cwts. per annum could be spared in 1941-43, while the demand rose to several hundred tons. Accordingly, it became imperative to establish centres of production in India, and according to the information supplied by the Industries and Supplies Department of the Government of India, the productive capacity of several firms, which started manufacturing this chemical, rose to 60 tons in 1943-44 and nearly 160 tons in 1944-45.

Raw materials.

26. The two important raw materials required in the manufacture of this chemical are: (*a*) pyrolusite ore, which contains from 80 to 82 per cent. manganese dioxide, and (*b*) caustic potash. Of these, the former is found in abundance in India, which in fact is one of the great sources of supply for the world. The latter, however, is not yet manufactured in India on any large scale, and must therefore be imported from abroad. It is stated that under Indian conditions 21 cwts. of pyrolusite and 19 cwts. of caustic potash are required for the manufacture of one ton of potassium permanganate. Caustic potash may, however, be locally prepared either by treating potassium nitrate, which is found abundantly in certain parts of India with wood charcoal and lime, or from wood ash, which contains potassium carbonate, by treating it with sodium hydroxide.

Process of manufacture.

27. Potassium permanganate is manufactured in India by the following three methods:—

(*a*) *From pyrolusite and caustic potash.*—Requisite quantities of pyrolusite powder and caustic potash are thoroughly mixed and oxidised in the presence of excess of air in furnace heated by coal. The oxidised mass is leached and allowed to settle. The clear liquid is taken to an electric cell where it is further oxidised to permanganate. The permanganate liquor is poured into vessels in which crystals separate out, which are again subjected to further refinement and drying.

(*b*) *From pyrolusite and potassium nitrate.*—Potassium nitrate is burnt with charcoal to produce potassium carbonate. The crude potassium carbonate is extracted in water and treated with lime to yield caustic potash. This is then reacted with powdered pyrolusite ore and the potassium manganate thus formed is treated with carbon dioxide gas to give potassium permanagate which is crystallised.

(*c*) *From pyrolusite and wood ash.*—Wood ash, which contains potassium carbonate, is fused with sodium hydroxide and the mixture, when treated with pyrolusite and potassium nitrate, gives potassium manganate. The manganate is converted into permanganate by passing carbon dioxide or chloride into it.

28. Potassium permanganate is an important chemical which is used as an oxidising agent in the manufacture of various fine chemicals, dye-stuffs, pharmaceuticals, synthetic drugs and saccharine, and in nickel refining. It is also used in fairly large quantities for sanitation purposes, as a deodorant and a disinfectant. It is also used as a bleaching agent and as a raw material for several organic compounds such as hydroquinone. It is reported that the Germans used it as a catalytic agent in one of their rockets.

Uses.

29. In view of the fact that this chemical is not shown as a separate item in the Statement of Sea-Borne Trade, it was not possible to ascertain the exact quantities imported into India before the war. According to the Department of Industries and Supplies, Government of India, the prewar annual imports of potassium permanganate might be taken at 100/150 tons, while, according to a leading firm of importers, the annual imports were about 240 tons, made up as follows :—

Imports.

	Tons
Disinfectants, preservatives, purification of water, etc.	160
Special photographic process and tanning	80

30. The consumption of this article in the hospitals is rather small. It was stated that in the two large Bombay hospitals, namely the J. J. Hospitals and the K. E. M. Hospital, the annual consumption was only 12 lbs. and 2 lbs. respectively. However, its demand for public health purposes by the local bodies and municipalities is much larger, though it is subject to considerable variation according to whether or not an epidemic is raging in any part of the country. It was stated that in normal years the consumption for public health purposes by the Bombay Government alone is 5 tons which does not include the demand by the local bodies and municipalities. In an exceptional year in which either a large congregation of people may take place or an epidemic may rage, the demand may increase several times. Taking all the factors into account, it is estimated that the annual demand for this chemical for health as well as industrial purposes is about 200 tons.

Domestic demand.

31. It is stated above that during the war the productive capacity for this chemical was stepped up to nearly 160 tons per annum but the actual production in any year was considerably below this figure. The Department of Industries and Supplies, Government of India, had kindly furnished information regarding the rated capacity

Domestic production.

of the different units, which together with the information supplied by the manufacturers is summarised below :—

	Annual production capacity		Actual annual production as given by the producers.
	As given by I & S. Deptt.	As declared by producers.	
	Tons.	Tons.	Tons.
1. Bengal Chemical and Pharmaceutical Works, Ltd., Calcutta.	100	18 in '47 — 30 tons in future—150 tons	in '43—11·50 in '44—13·65 in '45— 8·40
2. Indian Chemical, Manufacturers, Ltd. Lahore.	20	40 no work at present for breakdown of C_{02} plant.	in '43/44—3·51 in '44/45—4·50 in '45/46—6·75
3. Chemicals, Ltd., Nidadavolu, West Godavari Distt. M. & S. M. Rlo. same as Vijananam Industries ..	30	40	in '44/45—4·75
4. Gandhi Chemical Industries, Bombay	6	Not known ..	Not known.
5. Mohd. Allah Baksh	5	Do.	Do.
6. *Oriental Chemical Works, Bombay and Chemical Laboratories, Bombay	*10	6	in '44/45—4·01
Total annual productive capacity in India	171 tons	..	..

So far as the Bengal Chemical and Pharmaceutical Works, Ltd., who are one of the principal manufacturers, are concerned, it may be stated that their present installed capacity is 24 tons per annum. They have, however, placed orders for a bigger plant which they expect will go into operation in about eighteen months, and which is stated to have a productive capacity of 150 tons per annum.

Quality of the indigenous product.

32. According to the evidence given by the physicians present at the public inquiry, the quality of the indigenous product is quite satisfactory. The opinion was, however, expressed that the local manufacturers have not yet been able to prepare crystals of the same uniformity and size as imported from abroad and that this factor produces a certain amount of prejudice against the local product. There is thus room for improvement so far as appearance is concerned and the Indian manufacturers present at the inquiry assured us that every effort would be made to improve the appearance of the indigenous product.

33. The existing rate of customs duty on potassium permanganate is as follows:—

Existing duty.

Name of article.	Nature of duty.	Standard rate of duty.	Preferential rate of duty if the article is the produce or manufacture of		
			The United Kingdom.	A British Colony.	Burma.
28 (8) Potassium permanganate.	Revenue	30 per cent. ad valorem.	..	..	..

C.i.f. and Landed Cost

34. Before the war, the landed cost of B. P. quality of potassium permanganate including duty imported from England was about Rs. 65 per cwt. There were, however, some consignments from the continent of which the landed cost inclusive of duty was Rs. 49-6-0 per cwt. The present c. i. f. prices, landed costs and selling prices, as supplied by three importing firms, are given below :

	1st firm Tech. grade.	2nd firm B. P. grade.	3rd firm	
			B. P. grade.	Tech. grade.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
C. I. F. price	132 10 10	137 2 1	149 5 4	127 12 0
Duty	30 15 11	41 8 0	52 4 3	44 11 5
Clearing charges	3 5 11	2 11 10	3 11 9	3 3 1
Landed cost	176 0 7	181 6 0	205 5 4	175 10 6
Selling price	211 12 6	..	224 0 0	189 0 0

It will be seen from the above that while according to one firm the landed cost of B. P. grade is Rs. 181-6-0 per cwt., according to another firm it is Rs. 205-5-4 per cwt. On the other hand, the landed cost of the technical grade of the product according to the first and third firms is about Rs. 176 per cwt. The Indian manufacturers stated that their products were made in accordance with the B. P. standards of purity, but since it is possible that the Indian product may be offered competition by the technical grade imported from abroad, and there would be administrative difficulties in distinguishing between the two grades, it is desirable that we should take the lowest landed cost of the technical grade into consideration for evaluating the duty necessary to protect the Indian industry. This, as shown in the table above, is Rs. 175-10-6 per cwt.

Estimated cost of production.

35. The Bengal Chemical and Pharmaceutical Works were costed by the Cost Accounts Officer deputed by the Board for the purpose of ascertaining their cost of production of potassium permanganate. The firm's estimate of cost production of potassium

permanganate is given in appendix IV. These costs were examined by the Board, and after making certain necessary adjustments, the Board's estimate of the cost of production of this chemical by the above mentioned firm is as follows:

Board's estimate of the cost of production of potassium permanganate from pyrolusite and caustic potash.

Productive capacity : 2 tons per month.

	Rs.	a.	p.
1. *Materials*:			
(a) Pyrolusite powder 21 cwts. @ Rs. 6/8	136	8	0
(b) Caustic potash 19 cwts. @ Rs. 50/9	960	11	0
	1,097	3	0
2. *Power & fuels.*			
(a) Electricity 3,500 units @ 0·56 annas per unit	122	8	0
(b) Coal 2 tons @ Rs. 20 per ton	40	0	0
(c) Steam 49,500 lbs. @ 0·8 pies per lb.	206	4	0
3. *Labour.*			
21 heads @ Rs. 40 per month 3 heads @ Rs. 80 per month } Rs. 1,080 per 2 tons	540	0	0
4. Repair and maintenance	85	0	0
5. Consumable stores	10	0	0
6. Establishments	120	0	0
7. Depreciation	128	0	0
8. Other overheads 20% on labour & material (1,097-3-0 plus 540 plus 120)	351	7	0
9. Packing at Rs. 6 per cwt.	120	0	0
10. Interest at 4% on working capital (Rs. 34,000)	57	0	0
	2,877 per ton.	6	0

Rs. 143-11-0 per cwt.

NOTE.—The figure of Rs. 34,000 taken as the working capital represents the value of the products manufactured in six months.

Fair Selling price.

36. In order to arrive at the fair selling price, profit on fixed capital must be added to the cost of production as found above. The fixed capital for the present plant, having a productive capacity of 24 tons per annum, was stated by the firm to be Rs. 58,000. Allowing profit at the rate of 10 per cent. on it the fair selling price works out as follows :—

	per ton Rs.
Cost of production	2,877
Profit on Rs. 58,000 @ 10%	242
Total ..	Rs. 3,119 per ton

=Rs. 156 per cwt. (to the nearest rupee).

Thus, the fair selling price, on this basis, works out at Rs. 156 per cwt., which compares with the price of Rs. 156-6-7 per cwt. including profits given by the Indian Chemical Manufacturers, Ltd., Lahore, who use a somewhat different method, but whose books were not examined by the Cost Accounts Officer of the Board (*vide* appendix V).

37. The following points are noteworthy in connection with the above cost

of production :

(1) This cost has been calculated on the basis of production of 24 tons per annum. As stated earlier, Bengal Chemical & Pharmaceutical Works, Ltd., have already placed an order for a bigger plant having a productive capacity of 150 tons per annum. It was estimated by our Cost Accounts Officer that with the bigger plant the cost of production should come down to about Rs. 118 per cwt. This, however, is somewhat in the nature of guess work as the real costs can only be ascertained after the plant has been in operation for some time.

(2) Even with the present plant it was noticed there is some wastage of steam and that the yield of permanganate from the given quantities of pyrolusite and potash is rather low. The attention of the firm was drawn to these two factors, and they have agreed that the yield should be increased. They stated that with the new rectifiers, one of which has already been installed while three others are on order, the yield is bound to go up. When these improvements are carried out, there should be some reduction in the cost of production even with the present plant.

Measure of protection.

38. On a comparison of the fair selling price as arrived above and the lowest landed cost as given by the importers, it will be seen that the present revenue duty gives adequate protection to this industry. The manufacturers' representatives agreed with this point of view. They, however, requested that, in order to stabilise the industry, the present revenue duty should be converted into a protective duty and that they should be given a rebate of duty on the potash used by them which would place them on equal grounds with the foreign manufacturers. Caustic potash is not produced in the country, and it is subject to a revenue duty of 30% ad valorem. It was, however, stated at the public inquiry that as a result of the throwing open of imports of caustc potash from the U.S.A., this chemical will be available at the Indian ports at about Rs. 44 per cwt. as against the present price of about Rs. 51 per cwt. and that this decrease of Rs. 7 per cwt. in its price should bring about a reduction in the cost of production of potassium permanganate. It is noted that even with the present price of caustic potash at Rs. 51 per cwt., the Indian manufacturer can compete with the foreign imports, while he will be in a more favourable position to do so when he obtains his supplies of caustic potash at a lower rate. In view of these reasons, we are unable to accept the request that the manufacturers of potassium permanganate should be given a rebate of revenue duty on the caustic potash used by them. We, however, accept their request for converting the present revenue duty into a protective duty and recommend that a protective duty of 30 per cent. ad valorem should be imposed on all imports of potassium permanganate from abroad and that this duty should remain in force for a period of 2 years up to 31st March 1949. We have recommended the imposition of this protective duty for a period of 2 years in view of the information given by the Bengal Chemical and Pharmaceutical Works, Ltd., that their new plant with a capacity of 150 tons per annum will be installed and will be in operation before that date and we feel that after the new plant is installed, the matter should be reinvestigated in order to determine whether any further protection is necessary. We also recommend that if during the next two years ending 31st March 1949 the

landed cost of potassium permanganate goes down below Rs. 156 per cwt., action should be taken by Government under section 4(1) of the Indian Tariff Act to raise the duty so as to equate the landed cost with the fair selling price as estimated by us.

Burden of protection.

39. Potassium permanganate is used as a deodorant and disinfectant in the interest of public health and is also employed as a raw material in many chemical and pharmaceutical industries. It is, therefore, desirable in the interest of public health and industrial development that it should be available to the consumers at as low a price as possible. Since we have not recommended any increase in the existing duty, the question of any additional burden as a result of our recommendations does not arise, unless the duty has to be raised under section 4 of the Tariff Act because of a fall in the c.i.f. price. We are hopeful that when the bigger plant is installed, this chemical will be available to the public and the consuming industries at a lower cost than at present.

PART III.—ETHER SULPHURIC P.B. AND ANAESTHETIC.

History of the industry.

40. There was no production of ether in India before 1937, the country's demand being met entirely from imports. The Bengal Chemical & Pharmaceutical Works started manufacturing ether in 1937, while the Alembic Chemical Works commenced its manufacture in the following year. These two firms still remain the biggest manufacturers of ether in India, though during the war, owing to the larger demand which existed at that time, two ether firms, namely Lister Anticeptics and Dressing Co. Ltd., Calcutta and Leasco Chemical Works Ltd., Cawnpore, also installed small plants for the manufacture of this chemical. Their actual output, however, has been small.

Raw materials.

41. The most important raw material required in the manufacture of ether sulphuric is alcohol. In fact the economic production of ether depends upon the price of alcohol prevailing in the market. The yield of ether from alcohol varies somewhat depending upon the atmospheric temperature, being a little higher in a cooler than in a warmer climate. The pre-war price of alcohol in India was 12 to 14 annas per gallon, but it has now risen very considerably, ranging from Rs. 1-8-0 per gallon to Rs. 5-8-0 per gallon in the different provinces. The other chemicals required in the manufacture of ether are sulphuric acid, caustic soda, potassium permanganate and calcium chloride which are available in the country. The quantities of these chemicals required in the manufacture of ether, however, are relatively small.

Process of manufacture

42. Ether is produced by heating a mixture of concentrated sulphuric acid and alcohol, the inflow of alcohol being maintained at such a rate that the volume of the mixture remains unchanged and continuous ebullition proceeds smoothly without any break. The ether vapour, together with water and traces of acid vapour, is led through a caustic soda bubbler into a rectifying column from which it passes through a purifying tower and enters the condensers in which ice-cold water is allowed to circulate. The condensed liquid is led into storage tanks. This is ether sul-

phuric P.B. or pharmaceutical ether. During the formation of ether, side reactions also take place, producing sulphonic acid and esters which are sometimes found in the commercial variety. These products of side reactions may, however, be removed by further purification.

43. The pharmaceutical ether is treated with solutions of caustic soda, caustic potash and potassium permanganate to remove aldehydes and peroxide completely. The liquid is then treated with some stabiliser such as alpha-naphthol and put into special containers. This is the anaesthetic ether. One gallon of alcohol should normally give about 4·5 lbs. of pharmaceutical ether or about 2·5 lbs. of anaesthetic ether, though in actual practice the yield may be somewhat less. Sulphuric acid, which is continuously regenerated in the process, becomes gradually diluted with water and has to be brought back to its initial strength by the addition of fresh quantities of concentrated acid.

Uses.

44. As a solvent, ether is used on a large scale in the preparation of collodion, Chardonnet silk and certain explosives containing nitrates of cellulose. It is also used for dissolving fats and resins. The B.P. quality is also used in many pharmaceutical preparations. Ether anaesthetic is used in hospitals for anaesthetic purposes.

Imports.

45. Since ether is not entered as a separate item in the Statement of Sea-Borne Trade, no reliable figures are available in regard to its imports. It is, however, estimated by the Industries & Supplies Department, Government of India that during the pre-war years imports of the B.P. quality averaged about 55 tons or 123,000 lbs. while that of the anaesthetic quality averaged about 15 tons or 33,500 lb. per annum. It should be mentioned here that the anaesthetic quality is always imported in one lb. bottles, while the B.P. quality may be imported either in small bottles weighing one lb. or in drums weighing from 28 lbs. to 112 lbs. The reason for importing the B.P. quality in two different types of containers is that while the large industrial concerns, which use ether for industrial purposes or for pharmaceutical preparations, purchase it in drums to save the cost of containers as well as freight, the small dispensaries, who use it for dispensing purposes, often buy it in one lb. bottles.

Domestic demand.

46. In the absence of any reliable import figures, it is difficult to give an indication of the probable demand in the near future. The Industries & Supplies Department, Government of India, estimate that in the next two or three years 50,000 lbs. of ether anaesthetic and 2,50,000 lbs. of ether B.P. will be consumed per annum in the country. This estimate was generally agreed to by those present at the public inquiry. The doctors present at the inquiry stated that so far as ether anaesthetic is concerned, the average consumption in the hospitals is about 2 lbs. per patient per annum. According to this estimate and the number of beds given in the Bhore Committee's report, the total hospital requirement of the anaesthetic variety should be about 130,000 lbs. per annum, which is rather in excess of the estimate made by the Industries & Supplies Department. Taking an average of the two figures, we may assume that the demand in the near future of the anaesthetic variety will be about 90,000 lbs. per annum, while that of the B.P. variety

will be about 250,000 lbs. per annum, the total quantity required being 340,000 lbs. per annum. As in the case of chloroform, the hospital demand may decrease owing to the present trend in medical science, but this may be offset by an increase in the consumption of ether B.P. for industrial and Pharmaceutical purposes.

Domestic production.

47. The Department of Industries and Supplies, Government of India, had kindly furnished us with information regarding the rated capacity of the different units in India. This together with the information supplied by the manufacturers regarding their productive capacity and actual production may be summarised as under :—

List of manufacturers with their rated capacity and actual production.

Name of the producer.	Annual productive capacity				Actual annual production in 1944-45	
	As given by I. & S. Deptt.		As declared by producers			
	P.B.	Anaesthetic	P.B.	Anaesthetic	P.B.	Anaesthetic
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1. Bengal Chemical and Pharmaceutical Works Ltd., Calcutta	60,000	1,44,000	1,80,000 (total)		31,517 (total)	7,844
2. Lister Antiseptics and Dressing Co., Ltd., Calcutta ..	3,000	3,000	14,400 ,,		342	127
3. Alembic Chemical Works, Baroda ..	1,00,000	10,000	2,70,000	or 1,80,000	28,921	200
4. Lenaco Chemical Works Ltd., Cawnpore	10,000	10,000	..	..	..	..
Total annual production capacity in India	1,73,000	2,67,000				

Actual annual production of Bengal Chemical & Pharmaceutical Works and Alembic Chemical Works, in the three years 1943, 1944 and 1945, is as follows:

	1943	1944	1945
	lbs.	lbs.	lbs.
Bengal Chemical & Pharmaceutical Works	40,631	44,921	6,880
Alembic Chemical Works, Baroda	90,651	103,392	14,866
	1,31,282	148,312	27,746

This statement was examined at the public inquiry and we were informed that the installed capacity of the Bengal Chemical and Pharmaceutical Works' plant is 180,000 lbs. while that of the Alembic Chemical Works is 270,000 lbs. These relate to the continuous working of the plants for 24 hours for 300 days in the year, and the quantities given above are for the production of the B.P. quality. Approximately one-third of the output in each case can be converted into the anaesthetic variety if required. No information was forth-coming as to whether the other two firms are still in production of ether. We may, therefore, conclude that the total productive capacity at present installed in the country for the manufacture of ether sulphuric P.B. and ether anaesthetic is as follows:

Bengal Chemical and Pharmaceutical Works, Ltd.

	Lbs.
Ether P.B.	1,20,000
Ether anaesthetic	60,000
Total	1,80,000

Alembic Chemical Works, Ltd.

	Lbs.
Ether P. B.	1,80,000
Ether Anaesthetic	90,000
Total	2,70,000

It will thus be seen that the productive capacity installed in the country is enough to meet the country's estimated requirements of both varieties during the next few years.

Quality of the indigenous product.

48. The quality of the B.P. product, which has been used for industrial purposes and in laboratories, was stated at the public inquiry to be quite satisfactory. Similarly, the quality of the anaesthetic variety was also stated to be quite satisfactory by the doctors present at this inquiry. They, however, mentioned that they would prefer the anaesthetic ether to be packed in bottle with copper lining, but it was pointed out that this method of packing, besides being expensive, was now unnecessary as stabilisers have been discovered which perform the same function which was previously performed by the copper lining of the container, namely, the prevention of the conversion of ether into peroxides and aldehydes. It was pointed out that the phenolic stabiliser used for this purpose give the same test as peroxides and aldehydes, and, therefore, users should not be alarmed if they get a positive result of this test. To avoid confusion, the test should be performed, under ideal conditions, by first redistilling the ether so as to remove the stabilisers.

Existing Duty.

49. The existing rate of duty is shown below.—

Item No.	Name of article	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of		
				U.K.	A Br. Colony	Burma.
28	Ether ..	Preferential revenue.	36% ad valorem.	24% ad valorem.	24% ad valorem.	12% ad valorem.

C.i.f. and Landed cost.

50. According to the information supplied by the Industries and Supplies Department, Government of India, the pre-war price of imported ether ranged from Rs. 100 to Rs. 112 per cwt. This presumably refers to the pharmaceutical variety, as, according to a firm of importers, the landed cost of the anaesthetic variety was about Rs. 2-0-9 per lb. The present c.i.f. price and landed costs, as given by two firms, are as follows.—

	1st firm.		2nd firm.	
	B.P.	Anaesthetic.	B.P.	Anaesthetic.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
C. I. F.	0 10 7	1 12 6	2 1 9	2 3 7
Customs Duty	0 3 10	0 10 0	0 8 1	0 8 6
Clearing Charges	0 0 2	0 1 0	0 0 10	0 0 10
Landed Cost	0 14 7	2 7 6	2 10 8	2 12 11
Selling Price	1 1 4	2 10 10	2 14 0	3 0 0

The reason for the large difference in the prices of the pharmaceutical variety quoted by the two firms is that whereas the first firm imported it in drums, the second firm imported the B.P. quality also in one lb. bottles. Since the Indian manufacturers usually supply the B.P. quality in drums and the anaesthetic quality in bottles, we should take the c.i.f. price of Rs. 0-10-7 for the B.P. quality and about Rs. 2 for the anaesthetic quality for assessing the duty which would be necessary to give adequate protection to the Indian products.

51. The Cost Accounts Officer deputed by the Board was sent both to the Alembic Chemical Works Ltd., and the Bengal Chemical & Pharmaceutical Works Ltd., to examine their books with a view to determining their costs of production of ether sulphuric P.B. and ether anaesthetic. Both these factories manufacture a large number of items besides ether, and the accounts are not maintained separately for the different items. This necessitated an indirect process of allocating expenditure to different heads, and in many cases the allocation was more in the nature of an estimate rather than a figure based upon actual data. The Alembic Chemical Works manufacture their own alcohol, which is the principal raw material required in the production of ether ; but they did not place before our Cost Accounts Officer any data relating to the cost of production of alcohol. In estimating their cost of production of ether, they assumed a price of Rs. 4 per gallon for alcohol, but at the public inquiry, they stated that they would be willing to accept any price fixed by the Board. Furthermore, in the process of manufacture of alcohol, carbon dioxide—a bye-product—is collected and sold by them in the market, but no credit on this account was given in their cost statements. The allocation of overheads was done in an arbitrary way, while the debits recorded on account of steam, power etc., were also on a rough and ready basis without any relationship to the actual quantities used. Their attitude, on the whole, was not at all co-operative, especially in regard to the cost of production of alcohol which was one of the most important items on which information was required by the Board. On all these accounts, the costs submitted by them are not regarded as reliable and were not accepted by us. We must, at this stage, emphasise the fact that it is the duty of all industrial firms, who apply for protection, to place their data unreservedly before the Board and help it in its work and deliberations by offering it full co-operation in the matter of detailed information on the production costs of their items. If such information is not forthcoming or is deliberately withheld, the task of the Board is made extremely difficult. In the light of these observations, the attitude adopted by the Alembic Chemical Works was regrettable indeed. It clearly gave the impression that while they were prepared to take full advantage of any assistance or protection that may be offered to the industry, they were not willing to offer their full co-operation by disclosing their real costs of production.

Estimated cost of production.

52. On the basis of the data supplied by the Bengal Chemical & Pharmaceutical Works and after making certain adjustments, the Cost Accounts Officer, deputed by the Board, estimated the cost of production as given in the following table :—

Estimate of the cost of production of ether sulphuric P. B. and ether anaesthetic based on a production of 10,000 lbs. & 20,000 lbs. respectively.

	Ether sulphuric B.P.		Ether anaesthetic :		
	Per 10,000 lbs. in Rs.	per lb. in. Rs.		per 20,000 lbs. in Rs.	per lbs. in Rs.
1 Materials—					
(*a*) Spirit 2858 gallons at Rs. 2/8 per gallon	7,145	0·7145	8,000 gallons	20,000	..
(*b*) Sulphuric acid 20 cwts. at Rs. 154 per ton	154	0·0154	45 cwt.	344	..
(*c*) Ice 187 blocks of 3 mds. each at Rs. 4 per block ..	748	0·0748	880 blocks	3,520	..
(*d*) Potassium permanganate 3·751 lbs. at Rs. 2 per lb. ..	7·5	0·0007	7·5 lbs.	15	..
(*e*) Caustic soda 15 cwts. at Rs. 19/8 per cwt.	292·5	0·0293	40 cwt.	780	..
(*f*) Calcium chloride 3·75 cwt. at Re. 1 per lb.	420·0	0·0420		..	..
(*f*) Potassium iodide 200 lbs. at Rs. 8/9 per lb.	..	..	..	1,712	..
(*h*) Mercuric choloride 47 lbs. at Rs. 20 per lb.	..	..	..	940	..
(*i*) Pyrogallic acid 3·75 lbs. at Rs. 27 per lb.	..	..	..	101·25	..
	8,767·0	0·8767		27,412·25	
Less recoveries—					
I. Sulphuric acid 14 cwt. at Rs. 140 per ton=Rs. 98 ..	183·0	0·0183	30 cwts.—Rs. 210 ..	.. 420.00	
II. Caustic soda 8·5 cwts. at Rs. 10 per cwt.=Rs. 85 ..			30 cwts.— Rs. 210 ..		
	8,584·0	0·8584		26,992·25	1·3496

2	Power and Fuel—					
	(*a*) Steam Rs. 1,210					
	(*b*) Electricity Rs. 20	1,255·0	0·1255	Steam Rs. 2,420	2,500·00	0·1250
	(*c*) Water Rs. 25			Electricity Rs. 30		
				Water Rs. 50		
3	Labour—					
	(*a*) Workers Rs. 2,000	2,200·0	0·2200	Workers 6,133	6,683·00	0·3342
	(*b*) Supervision Rs. 200			Supervisions 550		
4	Repairs and Maintenance	520·0	0·0520		1,040·00	0·0520
5	Consumable Stores	62·0	0·0062		125·00	0·0062
6	Establishment	40·0	0·0040		115·00	0·0057
7	Depreciation	245·0	0·0245		330·00	0·0165
8	Other overheads	2,125·0	0·2125		6,758·00	0·3379
9	Packing	1,700·0	0·17000		11,000·00	0·5500
		16,731·0	1·6731		55,543·25	2·7771
		=Rs. 1-10-9			=Rs. 2-13-4.	

Measure of protection.

53. This estimate was examined at the public inquiry, and it was found that the system of keeping accounts, which had been followed by the Bengal Chemical and Pharmaceutical Company, was such that no accurate figures could be assigned to various items such as labour, establishment, overhead, power and fuel, etc. All these allocations had been made by the Company in an indirect manner, and by applying the system of cross-checks it was found that in many cases these figures were assumed rather than based upon actual data. Taking, for example, the case of the pharmaceutical quality for purposes of comparison, it would be seen that while the c.i.f. price of the imported article is Rs. 0-10-7 per lb., the net cost of production at the Bengal Chemical and Pharmaceutical Works, excluding profits, is stated to be Rs. 1-10-9 per lb. This would necessitate a protective duty of about 150 per cent. in order to equate the price of the imported article with the net cost of production.

54. It was represented to us that one reason why the costs of production of ether in India were so high was the relatively high price which the Indian manufacturer had to pay for alcohol as compared with the British manufacturer. It was stated that the British manufacturer would be able to get his alcohol at 1 *sh.* 10 *d.* which is equal to about Rs. 1-4-0 per gallon, while the Bengal Chemical and Pharmaceutical Works have to pay Rs. 2-8-0 per gallon. It was, however, pointed out that even if the Indian manufacturer were supplied with alcohol at the same price as the British manufacturer, it would make a difference of only Rs. 0-5-0 in the price of ether B. P. and Rs. 0-8-0 in the price of the anaesthetic quality, thereby reducing the net cost of production of these two varieties to Rs. 1-5-8 for the B. P. and Rs. 2-3-8 for the anaesthetic variety. Even if this handicap of the Indian manufacturer in regard to difference in the price of alcohol were removed a high protective duty amounting to over 100 per cent. would be necessary to enable him to compete with the foreign manufacturer. This fact alone is sufficient to show that the allocation made for such items as power and fuel, repairs and maintenance, establishment, other overheads etc., are much too high, and require to be verified against actual data. In fact, the representative of the Alembic Chemical Works stated at the public inquiry that they allow overheads amounting to 8 annas per lb. which seems an abnormally high figure in view of the fact that the c .i. f. price of the imported ether is only Rs. 0-10-7 per lb. Another factor which seems to have been lost sight of is that normally the overheads should diminish with increasing production, but in this particular case they were assumed at a constant rate per lb. regardless of production. When all these facts were pointed out to the representatives of the industry, they agreed that sufficient data was not yet available to enable the Board to draw any definite conclusions, and requested that the case may be kept open for further inquiry so that in the meantime the industry may be able to collect more reliable data in which the items under the different heads are directly ascertained. They also requested that in order to enable them to work their plant at its full capacity for a sufficiently long period of time, Government may be asked to stop all imports of ether into the country on an assurance given by the manufacturers that they would sell both the B. P. and the anaesthetic qualities at prices quoted at present by the importers. They based this request on the ground that

sufficient productive capacity exists in the country to meet its full requirements and that it should be given a chance to work for about a year so that the industry may be able to ascertain definite costs of production and place them before the Board for a further inquiry. We have carefully considered this proposal, but we cannot see our way to accepting the request made by the industry for the complete stoppage of imports as we feel that both firms concerned in this matter are sufficiently big to undertake the manufacture of ether for the purpose of working out their costs without any serious reduction in their profits. It is quite the normal practice for large industrial concerns to make pioneering efforts to produce new items and to invest certain sums of money in these efforts on which immediate returns may not be available but which are likely to yield good profits in the long run. We suggest that this course should be adopted by the two firms, who are earning fairly large profits on other items, in respect of ether, so that they may be in a position to place before the Board accurate data with regard to their costs of production. We further recommend that in the meantime the case may be kept open for further inquiry which may be made when the industry is ready for it and again approaches Government.

Price of and freight on alcohol.

55. In the course of this inquiry it transpired that the position regarding the price of alcohol and the freight charged on it from one province to the other and the excise rates which govern it is far from satisfactory. Alcohol is used as a raw material or as a solvent in numerous industries which are scattered all over the country, and in our opinion it is essential that it should be supplied to these industries at a fairly uniform price. We were informed that the price of alcohol per gallon is Rs. 1-6-0 in U. P., Rs. 2-8-0 in Bengal, Rs. 4-0-0 in Bombay and Rs. 5-8-0 in Madras, and that there is very little relationship with the price of raw materials used in its manufacture. It was also reported to us that the rate of duty which is levied upon alcohol varies from province to province and that this variation is considerable. It was further reported to us that the freight charged on alcohol for taking it from a surplus to a deficit area is excessive and that the provincial excise rules are not framed so as to help the cause of industrial development in India. We recommend that the Government of India should convene a conference on alcohol as early as possible to suggest ways and means of ensuring that this important raw material is supplied to different factories in India at approximately the same price, that a suitable reduction in freight is made and that the provincial excise rules are modified in the interests of the industry.

PART IV.—SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS.

56. Our conclusions and recommendations may be summarised as under :—

PART I.—Chloroform.

(1) Figures relating to import and production of chloroform should be entered as separate items in the Annual Statement of Sea-Borne Trade and the Statistics of Production respectively. (Paragraph 13.)

(2) The requirements of the anaesthetic variety for the hospitals are estimated at 50,000 to 70,000 lbs. per annum; while the demand for the commercial variety is estimated to be over 200,000 lbs. per annum (paragraph 14).

(3) The productive capacity of the plants installed in India for the manufacture of chloroform is less than 10 per cent. of the total estimated requirements of the country. (Paragraph 16.)

(4) The chloroform manufactured in India is upto the required standard of purity. (Paragraph 17.)

(5) Since the quantity of bleaching powder, which is one of the essential raw materials of chloroform, is not enough to meet the country's requirements, and its cost of manufacture is likely to be higher than in other countries for some time, the manufacture of chloroform does not enjoy the natural advantage of having its raw materials available in the country at competitive prices. [Paragraph 21 (*i*).]

(6) If a protective duty is imposed on chloroform to stimulate the manufacture of the anaesthetic variety, it would impose an unduly high burden on the users of the commercial quality, who constitute the bulk of the consumers. [Paragraph 21 (*ii*).]

(7) From the scientific point of view, the manufacture of chloroform in India should follow in the wake of a well-established bleaching-powder industry. It is, therefore, premature to grant a subsidy to an industry which uses bleaching powder, which has to be imported, as one of its raw material. (Paragraph 23.)

(8) As conditions exist at present, no case has been made out for any measure of protection or assistance to the manufacture of chloroform in India. (Paragraph 24.)

PART II.—Potassium Permanganate.

(9) The estimated annual demand for potassium permanganate, both for public health and industrial purposes, is 200 tons. (Paragraph 30.)

(10) The productive capacity, as at present installed in the country, is 24 tons per annum; with the installation of a bigger plant for which order has been placed by a firm, the productive capacity is expected to be 150 tons per annum. (Paragraph 31.)

(11) The purity of the indigenous product is quite satisfactory, but there is room for improvement so far as its appearance is concerned. (Paragraph 32.)

(12) The lowest landed cost of the imported article at present is Rs. 175-10-6 per cwt., while the fair selling price for the Indian product, on the basis of an annual production of 24 tons, is estimated to be Rs. 156 per cwt. However, with a bigger plant, capable of producing 150 tons per annum, the cost of production should be lower. The present revenue duty of 30 per cent. *ad valorem*, therefore, gives adequate protection to the industry. (Paragraphs 34, 36 and 37.)

(13) The present revenue duty of 30 per cent. *ad valorem* should be converted into a protective duty at the same rate and this protective duty should remain in force for a period of two years upto the 31st March, 1949. (Paragraph 38.)

(14) If, during the next two years ending on 31st March, 1949, the landed cost of potassium permanganate goes down below Rs. 156 per cwt., action should be taken by Government under Section 4 (1) of the Indian Tariff Act to raise the duty so as to equate the landed cost with the fair selling price as estimated by the Board. (Paragraph 38.)

PART III.—ETHER SULPHURIC P. B. AND ANAESTHETIC.

(15) The Indian demand in the near future for the anaesthetic variety is estimated to be about 90,000 lbs. per annum, while that for B. P. variety for industrial purposes will be about 2,50,000 lbs. per annum, making a total of 3,40,000 lbs. per annum. (Paragraph 46.)

(16) The plants installed in the country for the manufacture of ether can produce 3,00,000 lbs. of ether P. B. and 1,50,000 lbs. of ether anaesthetic; and this capacity is sufficient to meet the country's estimated requirements of both varieties during the next few years. (Paragraph 47.)

(17) The industry has not been able to produce sufficient data with regard to costs of production from which the Board could draw definite conclusions. Until the industry is in a position to present accurate data with regard to their costs of production in about a year's time, the case should be kept open for further inquiry. (Paragraph 54.)

(18) Government of India should convene a conference of representatives of Provincial and State Governments concerned with a view to suggesting (*a*) ways and means of ensuring that alcohol, being an important industrial raw material, is supplied to the different factories in India at a uniform price, (*b*) suitable reduction in freight on alcohol, and (*c*) modification of the provincial excise rules in the interests of the industry. (Paragraph 55.)

Acknowledgements.

57. We wish to express our thanks to all those who assisted us in this inquiry, particularly to Dr. J. N. Ray of the Department of Industries and Supplies, Government of India, who prepared valuable notes and attended the public inquiry; Mr. S. V. Ayyar, Cost Accounts Officer (Supply Finance Department), who carried out the work of examining the accounts of the companies; Mr. S. D. Sunawala, our Technical Adviser, Rai Sahib Aggarwal, Deputy Secretary, and Dr. Rama Varma, Assistant Secretary, for the help rendered by them throughout the inquiry.

SHANMUKHAM CHETTY—*President.*

NAZIR AHMAD—*Member.*

S. C. AGGARWAL—*Deputy Secretary.*

BOMBAY;

Dated the 1st March, 1947.

APPENDIX I.

List of firms and organisations to whom the detailed questionnaire was issued.

(*Vide* PARAGRAPH 4.)

Name of firm or organisation.	Relating to the following industries.		
(A) PRODUCERS.			
1. Bengal Chemical & Pharmaceutical Works Ltd., Calcutta.	Potassium permanganate.	Chloroform ..	Ether sulphuric P. B. and Anaesthetic.
2. Chemicals, Ltd., Nidadavolu (M. S. M. Rly.).	Do. ..	Do. ..	Do.
3. Indentors' Syndicate, Bombay ..	Do. ..	..	..
4. Chemia Laboratories, Bombay ..	Do. ..	..	..
5. Shambhunath & Sons, Amritsar	Do. ..	..	..
6. Government Dichromate Factory Belagula.	Do. ..	..	..
7. Associated Chemicals, Itwari, Nagpur.	Do. ..	..	Chlor form Ether sulphuric P. B. and Anaesthetic
8. Deccan Chemicals and Fertilizers, Hubli.	Do. ..	..	..
9. Kamani Metal Refinery & Metal Industries Ltd., Jaipur.	Do. ..	..	Ether sulphuric P. B. and Anaesthetic.
10. Indian Chemical Manufacturers, Ltd., Lahore.	Do. ..	..	..
11. Gandhi Chemical Industries, Bombay.	Do. ..	..	..
12. Oriental Chemical Works, Bombay.	Do. ..	..	..
13. The Alembic Chemical Works Co., Ltd., Baroda.	..	Chloroform ..	Ether sulphuric P. B. and Anaesthetic.
14. The Lister Antiseptic & Dressing Co., Ltd., Calcutta.	Potassium Permanganate.	Do. ..	Do.
15. The Mysore Industrial & Testing Laboratory Ltd., Bangalore.	..	Chloroform ..	Ether Sulphuric P. B. and Anaesthetic.
16. The Mettur Chemical & Industrial Corpn., Ltd., Mettur Dam.	..	Do. ..	..
17. Walchand Nagar Industries Ltd., Bombay.	..	Do. ..	Ether Sulphuric P. B. and Anaesthetic.
18. The Lesco Chemical Works Ltd., Cawnpore.	..	Do. ..	Do.
19. Bharat Laboratory & Chemical Works, Calcutta.	..	Do. ..	..
20. Eastern Drug Co., Calcutta ..	..	Do. ..	..

APPENDIX I—*contd.*

Name of firm or organisation.	Relating to the following industries.		
(B) IMPORTERS.			
1. Imperial Chemical Industries (India) Ltd., Calcutta.	Potassium Permanganate.	Chloroform ..	Ether Sulphuric P. B. and Anaesthetic.
2. Kanthawala Nanavathi & Co., Ltd., Bombay.	Do. ..	..	..
3. Volkart Bros., Bombay ..	Do. ..	..	..
4. Boots Pure Drug Co. (India) Ltd., Calcutta.	Do. ..	Chloroform ..	Ether Sulphuric P. B. and Anaesthetic.
5. The British Drug Houses Ltd., Bombay.	..	Do.	Do.
6. R. S. Napper, Calcutta ..	..	Do. ..	Do.
7. L. H. Emeny, Bombay ..	..	Do. ..	Do.
8. May & Baker (India) Ltd., Bombay.	..	Do. ..	Do.
9. Martin & Harris Ltd., Bombay ..	..	Do. ..	Do.
10. Smith Stanistreet & Co., Ltd., Calcutta.	..	Do. ..	Do.
11. Kusalchand & Co., Calcutta ..	..	Do. ..	Do.
12. R. K. Shapurji & Co., Bombay ..	..	Do. ..	Do.
13. The Anglo Thai Corporation Ltd., Bombay.	..	..	Do.
(C) CONSUMERS.			
1. The Bombay Medical Association, Bombay.	Potassium Permanganate.	Chloroform ..	Ether Sulphuric P. B. and Anaesthetic.
2. The Bombay Medical Union, Bombay.	Do. ..	Do. ..	Do.
3. The Royal Institute of Science, Bombay.	Do. ..	Do. ..	Do.
4. The Commissioner of Corporation, Calcutta.	Do. ..	Do. ..	Do.
The Commissioner of Corporation, Bombay.	Do. ..	Do. ..	Do.
6. The Director of Public Health, Government of Bombay, Poona.	Do. ..	..	..
7. The Director of Public Health, Government of U.P., Lucknow.	Do. ..	..	..
8. J. J. Group Hospitals, Bombay.	Do. ..	Chloroform ..	Ether Sulphuric P. B and Anaesthetic.
9. K. E. M. Hospital, Bombay ..	Do. ..	Do. ..	Do.
10. St. George's Hospital, Bombay	Do. ..	Do. ..	Do.

APPENDIX I—*contd.*

Name of firm or organisation.	Relating to the following industries.		
11. Government Medical Stores Depot, Byculla, Bombay.	Potassium Permanganate.	Chloroform ..	..
12. The Public Analyst, Lucknow ..	..	Do.	Ether Sulphuric P. B and Anaesthetic.
13. The Charmichael Medical College Hospital, Calcutta.	..	Do.	Do.
14. The University Science College, Calcutta.	..	Do.	Do.
15. Director General, Indian Medical Service, New Delhi.	..	Do.	Do.
16. Standard Pharmaceutical Works, Ltd., Calcutta.	..	Do.	Do.
17. The Campbell Hospitals, Calcutta	..	Do.	Do.
18. Sarabhai Chemicals, Baroda ..	..	..	Do.
(D) Associations and others.			
All Chambers of Commerce ..			
Directors of Industries, Provincial Governments.			
Bombay Province Chemical Manufacturers' Association, Bombay.	Potassium Permanganate; Chloroform: Ether Sulphuric B. P. and Anaesthetic.		
Indian Chemical Manufacturers' Association, Calcutta.			
The All India Manufacturers' Organization, Bombay.			

APPENDIX II.

(*Vide* PARAGRAPH 6.)

List of persons who attended the Public Enquiry on 17th and 18th December, 1946.

PRODUCERS.

1. Mr. N. Adhikari	Representing Bengal Chemical and Pharmaceutical Works, Ltd., Calcutta.
2. Mr. I. S. Amin	Representing The Alembic Chemical Works, Ltd., Baroda.
3. Mr. B. H. Krishna	Representing Sarabhai Chemicals, Baroda.

ASSOCIATIONS.

	Representing—
1. Dr. L. A. Bhatt,	1. Indian Chemical Manufacturers' Assn., Calcutta.
	2. The All India Manufacturers' Organisation, Bombay.
2. Mr. Merlin Drake	Representing the Association of British Chemical Manufacturers, London.

IMPORTERS.

1. Mr. F. W. Griffin	Representing the British Drug Houses, Ltd. Bombay.
2. Mr. R. S. Napper Mr. H. Barett }	Representing R. S. Napper, Manufacturers' Representative, Calcutta.
3. Mr. W. Schesinger	Representing The Anglo-Thai Corporation, Ltd., Bombay.
4. Mr. S. S. Sarma	Representing May & Baker (India), Ltd., Bombay.

CONSUMERS.

1. Mr. M. G. Pandit	Representing Dy. A. D. G. (Medical Service), Bombay.
2. Mr. E. Benjamin	Representing The Director of Public Health, Government of Bombay.
3. Prof. R. C. Shah	Representing the Royal Institute of Science, Bombay.
4. Dr. K. K. Badachanji ..	Representing The Bombay Medical Association, Bombay.
5. Dr. S. G. Talwalkar ..	Representing the Bombay Medical Union, Bombay.
6. Capt. V. A. Mauskar ..	Representing the Suptd., J. J. Group of Hospitals, Bombay.
7. Mr. V. K. Kale	Representing the Suptd., K.E.M Hospitals, Bombay.
8. Dr. N. Y. Anegundi ..	Representing the Superintendent, St. George Hospital, Bombay.

OFFICIALS.

Dr. J. N. Ray	D. G. I. & S. Department, New Delhi.

APPENDIX III.

(*Vide* PARAGRAPH 20.)

Revised Estimate of Cost of 479 lbs. of Chloroform (as proposed by Bengal Chemical and Pharmaceutical Works, Ltd., Calcutta).

	Per 479 lbs. in Rs.	Per lb. in Rs.
1. Materials :		
(a) Bleaching powder (I. C. I.) 57·75 cwt. @ Rs. 13/8 per cwt.	779 10 0	2 2 8·1
(b) Spirit (denatured) 88 gallons @ Rs. 2/8 per gallon ..	220 0 0	
(c) Ice 8 blocks @ Rs. 3/8 per block	28 0 0	
(d) Distilled water 14 galls. @ Rs. 4 per gal.	3 8 0	
(e) Sulphuric Acid refined 62 lbs. @ Rs. 0-1-9 per lb. ..	6 12 6	
(f) Soda Ash 2 lbs. @ Rs. 0-1-5½ per lb.	0 2 11	
	1,038 1 5	2 2 8·1
Less for calcium chloride by-product		
500 lbs. coml. @ Rs. 0-4-0 per lb.	125 0 0	0 4 2·1
	913 1 5	1 14 6·0
2. Power and Fuel (Steam and Electricity)	37 13 6	0 1 3·3
3. Labour 524 man hours @ Rs. 1-6-6 per 8 man hours ..	92 1 9	0 3 0·9
4. Repair & Maintenance for 11 charge at Rs. 1/8/- per charge ..	16 8 0	0 0 6·6
5. Consumable Stores for 11 charge Rs. 0-2-0 per charge ..	1 6 0	0 0 0·6
6. Establishment for 11 charge Rs. 2 per day	22 0 0	0 0 8·8
7. Depreciation for 11 charge Rs. 2/- per still per charge. ..	22 0 0	0 0 8.8
8. Other overheads (22% on labour and material Rs. 1,005-3-2) ..	221 1 7	0 7 4·6
9. Packing charges @ Rs. 0-8-0 per lb.	239 0 0	0 8 0
Total cost of chloroform ..	1,565 8 3	3 4 3·5

APPENDIX IV.

(*Vide* PARAGRAPH 35.)

Estimate of the cost of production of potassium permanganate based on a production of 2 tons per month as given by Bengal Chemical and Pharmaceutical Works, Ltd., Calcutta.

	Per ton. Rs.	a.	p.
1. Materials:			
(a) Pyrolusite powder 22 cwt. @ Rs. 6/8/- per cwt.	143	0	0
(b) Caustic Potash 20 cwt. @Rs. 50/9/- per cwt.	1,011	4	0
	1,154	4	0
2. Power & Fuel:			
(a) Electricity—3,800 units @ 0.55 as. per unit.	133	0	0
(b) Coal—2 tons @ Rs. 20/- per unit	40	0	0
(c) Steam 66,000 lbs. @ 0·8 pies per lb.	277	8	0
3. Labour:			
21 heads @ Rs. 40 each per month, 3 ,, Rs. 80 ,, ,, ,, } Rs. 1,080/- for 2 tons.	540	0	0
4. Repair & Maintenance	85	0	0
5. Consumable stores	10	0	0
6. Establishments	120	0	0
7. Depreciation	128	0	0
8. Other overheads:			
22% on labour & materials Rs. 1,694/4/0	372	12	0
9. Packing @ Rs. 6/- per cwt.	120	0	0
Net cost of production	2,980	8	0
=	149	0	4·8
	per cwt.		

APPENDIX V.

(*Vide* PARAGRAPH 36).

Estimate of the cost of production (including profits) of potassium permanganate based on a production of 50 tons per annum, as proposed by Indian Chemical Manufacturers, Ltd., Lahore.

	Per 50 tons in Rs.	per cwt. in Rs.
1. *Materials*:		
(a) Manganese Dioxide 40 tons @ Rs. 200/- per ton ..	8,000	8 0 0
(b) Potassium Nitrate 50 tons @ Rs. 800 per ton ..	40,000	40 0 0
(c) Charcoal 20 tons @ Rs. 225/- per ton	4,450	4 7 2
(d) Limestone, 350 tons @ Rs. 25 per ton	8,750	8 12 0
(e) Coke 175 tons @ Rs. 70/- per ton	12,250	12 4 0
2. *Power & Fuel*—		
(a) Electricity 5,000 units @ Rs. 0-1-0 per unit ..	312 8 0	0 5 0
(b) Coal 600 tons @ Rs. 42 per ton	25,200 0 0	25 3 2
3. Labour @ Rs. 160 per ton—50 tons	8,000 0 0	8 0 0
4. Repairs and Maintenance	6,000 0 0	6 0 0
5. Consumable stores	2,500 0 0	2 8 0
6. Establishment	11,000 0 0	11 0 0
7. Depreciation of plant valued @ Rs. 15,000 @ 7% ..	1,050 0 0	1 0 10
8. Overhead including Taxes	10,000 0 0	10 0 0
9. Packing Charges	3,500 0 0	3 8 0
	1,41,012 8 0	141 0 2
Less Credit for materials recovered—5 tons Caustic potash @ Rs. 1,000 per ton	5,000 0 0	5 0 0
Net cost of production	1,36,012 8 0	136 0 2
Add profit 15%	20,401 14 0	20 6 5
Total cost (including profit)	1,56,414 6 0	156 6 7

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REPORT

OF THE

Indian Tariff Board

ON THE

GLUCOSE INDUSTRY

BOMBAY
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REPORT

OF THE

Indian Tariff Board

ON THE

GLUCOSE INDUSTRY

PERSONNEL OF THE BOARD

SIR R. K. SHANMUKHAM CHETTY, K.C.I.E.—PRESIDENT.

MR. C. C. DESAI, C.I.E., I.C.S.—MEMBER-SECRETARY.

DR. NAZIR AHMAD, O.B.E.—MEMBER.

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REPORT ON THE GLUCOSE INDUSTRY

Reference to the Board.

1. The case of the glucose industry was referred to the Board for investigation into its claim for assistance or protection by the Government of India, Department of Commerce, in their Resolution No. 218-T(55)/45, dated the 16th February 1946. The terms of reference are the same as for the starch industry and are reproduced below :—

"In the case of each industry the Board will, after such examination as it considers necessary, report whether the industry satisfies the following conditions :—

(1) that it is established and conducted on sound business lines ; and

(2) (*a*) that, having regard to the natural or economic advantages enjoyed by the industry and its actual or probable costs, it is likely within a reasonable time to develop sufficiently to be able to carry on successfully without protection or State assistance ; or

(*b*) that it is an industry to which it is desirable in the national interest to grant protection or assistance and that the probable cost of such protection or assistance to the community is not excessive. Where a claim to protection or assistance is found to be established, i.e., if condition (1) and condition (2) (*a*) or (*b*) are satisfied, the Board will recommend—

(*i*) whether, at what rate and in respect of what articles, or class or description of articles, a protective duty should be imposed ;

(*ii*) what additional or alternative measures should be taken to protect or assist the industry ; and

(*iii*) for what period, not exceeding three years, the tariff or other measures recommended should remain in force.

In making its recommendations the Board will give due weight to the interests of the consumer in the light of the prevailing conditions and also consider how the recommendations affect industries using the articles in respect of which protection is to be granted. Since relief, to be effective, should be afforded without delay, the Board is requested to complete its enquiries, with all possible expedition and to submit a report as soon as the investigation of the claim of each industry is concluded."

Application for protection.

2. Messrs. Rampur Maize Products, Ltd., Rampur (Rampur State), made a representation to the Commerce Department, Government of India, on the 13th July 1945, asking for provisional protection to the glucose industry. Later, they followed it up with another representation on the 7th August 1945, wherein they supplied information about their capacity, actual production, quality of their product, prices of the imported and indigenous glucose, etc., as a result of which Government referred the case to the Board.

Method of inquiry.

3. The Board issued a Press Communique on the 19th February 1946, inviting associations, firms and persons interested in this industry who desired their views to be considered by the Board to submit their representations by the 31st August 1946. This was

followed up by issue of a comprehensive questionnaire. A list of the firms or bodies to whom the questionnaire was issued and of those which replied to it is given in Appendix I. Dr. Nazir Ahmad, a Member of the Board, visited the Rampur factory on the 22nd October 1946. The oral evidence of representatives of producers, consumers and importers was taken at Bombay on the 7th and 21st November 1946. A list of the witnesses examined is given in Appendix II.

History of the Industry.

4. There was no indigenous production of glucose before the war. It was only in 1944 that glucose was produced in India on a commercial scale by three factories, viz. (1) Rampur Maize Products, Ltd., Rampur, (2) Bharat Starch & Chemicals Ltd., Abdullapur (Punjab) and (3) The Anil Starch Products, Ltd, Ahmedabad. In fact, the glucose industry in India forms a part and parcel of the starch industry.

Uses.

5. Glucose is used largely in various fermentation processes such as the manufacture of alcohol, vinegar, etc., and in making jams, confectionery, syrups, wines and caramel, and in the paper, textile and leather industries. 'Crystal' glucose is used in medicine and as food for infants and invalids. Liquid glucose can be used as a substitute for solid glucose and in addition it is also consumed in jute, cotton, rayon and silk factories.

Imports.

6. Separate import figures are not given in the "Annual Statement of the Sea-borne Trade of British India", glucose not being classified as a separate item. We are of the opinion that in future glucose should be shown as a separate item in the "Annual Statement of the Sea-borne Trade" and in the "Census of Production" so that India's requirement of this commodity may be known more accurately than at present. Messrs. Corn Products Co. (India) Ltd. who are the principal importers of glucose have given their imports of glucose during the past ten years as follows :—

Year	Quantity (Barrels)	Quantity (Tons)
1936	5,145	1,608 approx.
1937	6,765	2,114
1938	8,204	2,570
1939	8,299	2,593
1940	7,559	2,362
1941	4,995	1,543
1942	4,091	1,278½
1943	1,500	469
1944	250	78
1945	1,252	390½
Total	48,060 barrels	= 15,006 tons.

(One barrel = 700 lbs. approx.)

Their average annual imports over the past ten years including the war years thus equal 4,806 barrels or approximately 1,500 tons.

Estimated Indian demand.

7. We can form a rough estimate of the demand in the next few years on the basis of the imports during the years immediately preceding the war. It will be seen from the figures given in paragraph 6 that 28,413 barrels containing 8,885 tons of glucose were imported between 1936 and 1939, giving an average of about 2,200 tons per annum. The future estimated demand may therefore be taken as 2,500 tons per annum. a view which is accepted by both the industry and the importers.

Domestic production.

8. The three starch factories, namely, (1) Messrs. Rampur Maize Products Ltd., Rampur, (2). The Anil Starch Products Ltd., Ahmedabad, and (3) Bharat Starch and Chemicals Ltd., Abdullapur, Punjab, which have already installed equipment for making glucose, are reported to have a productive capacity of 3,600 tons per annum, while the other starch factories can also install the necessary equipment provided (*i*) there is demand and (*ii*) the raw material—starch in this case—is available. However, for various reasons, the chief being the shortage of starch and non-availability of activated carbon in wartime, the actual production of glucose by these factories has been much below their rated capacity as will be seen from the following statement:—

	Quantity of glucose syrup (in tons)			
	1943	1944	1945	1946
1. Rampur Maize Products, Ltd	....	....	180	260
2. Anil Starch Products, Ltd.	12	159	83	....
3. Bharat Starch, Ltd.	....	87·27	83·1	....
Total ..	12	246·27	346·1	260

Process of manufacture.

9. The main raw materials for the manufacture of glucose are starch and hydrochloric or sulphuric acid. There are two types of glucose, syrup and solid. The manufacture of the first is a comparatively simple process, and is especially easy for a starch factory which is conversant with the chemical treatment of starch. The actual process consists in heating starch mixed with water in the presence of a small quantity of acid under pressure, when it breaks down chemically into simpler substances. The chemical action is known as hydrolysis. If this process of hydrolysis is carried through to completion, the final product is dextrose. If the action is interrupted, glucose syrup is obtained. When the conversion reaches the syrup point, the heating is stopped, and the liquid is taken over in a tank, where it is neutralised with mild alkali. The syrup is then filtered and is evaporated under vacuum to proper consistency. The Indian product is marketed generally in syrup form packed in drums. The solid glucose can be further sub-divided into two groups, viz., corn sugar and pure dextrose. In the manufacture of dextrose, the hydrolysis started for syrup glucose is carried to completion. The resultant liquor is concentrated and the dextrose is crystallised by seeding, centrifuged and dried as in the sugar industry.

10. It is stated by all the consumers of indigenous glucose from whom we have received replies that the indigenous glucose is inferior in quality as compared with the imported glucose. The indigenous glucose is cloudy and gives varying tints. It has been stated that the same output of confectionery is not obtained with the Indian glucose as with the imported glucose. The producers admitted the existence of these defects. They pointed out that the process of manufacture adopted by them is the correct one, but the results were not satisfactory because of the shortage of some essential raw materials in wartime such as activated carbon. The Board is satisfied with the contention of the industry and expects that, as time passes, more experience is gained and the difficulty regarding some raw materials disappears, the local product will come up to the standard of the imported product, there being nothing inherently defective or wanting in the potentiality of the industry in India.

Quality of the indigenous product.

Existing rate of duty.

11. Extract from the Customs Tariff Schedule.

Item	Name of article.	Nature of duty.	Standard rate of duty.	Preferential rate of duty if the article is the produce or manufacture of.			Duration of protective rate of duty.
				U. K.	A. Br. colony.	Burma.	
21(2)	All sorts of food not otherwise specified.	Revenue	30 per cent. *ad valoren.*	..	..	12 per cent. *ad valorem.*	
28	Chemicals, Drugs, and Medicines, all sorts not otherwise specified.	Preferential Revenue.	36 per cent. *ad valorem.*	24 per cent. *ad valorem.*	24 per cent. *ad valorem.*	12 per cent. *ad valorem.*	

Ordinary glucose comes under item 21(2) and is subject to a 30 per cent. duty, whereas the pharmaceutical glucose falls under item 28 and is subject to a duty of either 24 or 36 per cent. according to source of supply.

12. Under the Cotton Textiles Sizing and Filling Control Order, factories which are allowed a certain quota of maize by the Textile Commissioner are forbidden to prepare any glucose. The object of this restriction is that since maize is scarce and the food position in the country is acute, the factories should not divert any of the food grains to any non-essential products. They were allowed a certain quantity of maize for starch as the latter was regarded as essential for the textile mills which produced an article of necessity only next to food for the people. These considerations are important even now, but we are of the opinion that in the interest of the healthy development of the starch industry, it would be desirable to allow the starch factories to convert a certain percentage of their starch into glucose. This would enable the starch factories to keep the glucose plants working for at least a part of the year and to carry on developmental

Permission to factories to manufacture limited quantities of glucose.

work, so that when the position regarding the supply of raw materials becomes easy, they would be able to bring down the cost of manufacture of starch. The preparation of a certain quantity of glucose is essential to place the starch industry on a strong competitive footing with foreign manufacturers and should therefore be regarded as an integral part of the scheme of protection and encouragement of the Indian starch industry. Another point in favour of this view is that glucose is a food product and therefore its manufacture should be fostered in the general interest of the health of the people. We recommend that the factories equipped with glucose manufacturing machinery should be allowed to convert a maximum of 10 per cent. of their starch production into glucose until the maize position becomes easier when the matter should be reconsidered and the restriction on conversion of starch into glucose relaxed.

Cost of production and landed cost.

13. The Board examined the reports of the Cost Accounts Officer in respect of Rampur Maize and Anil Starch. Mainly on account of the difficulty of getting an adequate supply of maize, and for other reasons, the factories were never able to reach their maximum output of glucose. On the assumption that enough maize will be available to enable them to produce 500 tons of glucose in the case of Anil and 1,000 tons of glucose in the case of Rampur, the cost of production will come to about Rs. 44 per cwt. in the case of Anil and Rs. 54 per cwt. in the case of Rampur. In the absence of reliable data, we were not able to examine the working costs of these two factories so as to ascertain whether the costs achieved by Anil could not be achieved by Rampur also. On account of the uncertainty in the supply position of maize, no useful purpose will be served by going into a detailed examination of the costs of production of syrup glucose by these factories at this stage. As against the cost figures mentioned above, the landed cost of imported Canadian glucose (syrup) is reported to be Rs. 56 inclusive of 30 per cent. revenue duty. What the landed cost of glucose imported from the U. S. A. will be it has not been possible to ascertain. We have, however, been told that it is likely that the U. S. A. price will be less than the Canadian price. Thus on the question of landed cost also, sufficient data are not available at this stage to enable us to express a definite opinion as to how far imported glucose will compete with the indigenous manufacture.

Action recommended.

14. It will be seen from the observations contained in the preceding paragraph that it is difficult at this stage to arrive with any degree of accuracy at either the cost of production of syrup glucose in India or the landed cost of imported glucose. Inspite of the uncertainty in these two matters, it is, in our opinion, necessary to take some action to give the glucose industry a reasonable chance to develop. There is another important consideration to be borne in mind. The development of the glucose industry is desirable in the interest of the development of the starch industry itself. It is only by developing by-products like glucose that the starch industry would in the long run be in a position to reduce its own manufacturing costs. For these reasons, we recommend that the present revenue duty of 30 per cent. should be converted into a protective duty to be in operation till the 31st March 1950. Our usual practice in recommending protection to other industries has been to suggest the application of section 4 (1) of the Indian Tariff Act with a view to offsetting the effect of a fall in the price of imports. We are advisedly not recommending this course in the case of glucose for the reason that, as has been mentioned above, it has not been possible to ascertain with any degree of accuracy either the cost of production or the landed cost. If there is a phenomenal fall in the landed cost of imported glucose, it would be open to the glucose manufacturers to approach the

Government again for a review of the case. The action that we now recommend is only a recognition of the fact that the development of the glucose industry is an integral part of the development of the starch industry for which we have recommended protection. If and when the glucose industry comes up for reconsideration, it would be the duty of the glucose manufacturers to show that they have succeeded in producing a product which would stand comparison with the imported variety. We are making this observation deliberately in view of the fact that the Indian manufacturers have to go a long way before their product could be considered to be satisfactory from the point of view of quality.

Summary of conclusions and recommendations.

15. Our conclusions and recommendations are summarised as below :—

(1) Glucose should be shown as a separate item in the "Annual Statement of the Sea-borne trade of India" (paragraph 6).

(2) The demand for glucose in the next three years is estimated at 2,500 tons per annum (paragraph 7).

(3) The productive capacity of the Indian factories is stated to be 3,600 tons per annum, although the maximum actual production in 1945 was only 346·1 tons (paragraph 8).

(4) The indigenous glucose is inferior in quality as compared with the imported glucose though there is no inherent reason why the quality should not improve with experience and increased production (paragraph 10).

(5) In the interest of the healthy development of the starch industry it would be desirable to allow the starch factories to convert a maximum of ten per cent. of their starch production into glucose until the maize position becomes easier when the matter should be reconsidered and the restriction relaxed (paragraph 12).

(6) The estimated cost of production, including profit in one of the factories is about Rs. 44 per cwt. whereas it is Rs. 54 in the other factory. The landed cost of imported glucose (Canadian) is reported to be Rs. 56 including 30 per cent. revenue duty. It has not been possible to ascertain the landed cost of U.S.A. glucose which however is expected to be below the Canadian price (paragraph 13).

(7) The present revenue duty of 30 per cent. should be converted into a protective duty and this duty should remain in force till the 31st March 1950 (paragraph 14).

Acknowledgments.

16. The Board's thanks are due to Mr. V. H. Mumford, Cost Accounts Officer, Dr. V. V. Kelkar, the Board's Technical Adviser and Rai Sahib S. C. Aggarwal, Deputy Secretary and Dr. Rama Varma, Assistant Secretary of the Board for the help and assistance rendered by them in the course of this inquiry.

SHANMUKHAM CHETTY—President.

C. C. DESAI—Member-Secretary.

NAZIR AHMAD—Member.

H. L. DEY—Member.

S. C. AGGARWAL—Deputy Secretary.

Bombay, 16th January 1947.

APPENDIX I.

List of the firms or bodies to whom the questionnaire was issued and of those which replied to it.

I. *Producers—*

1. Messrs. Rampur Maize Products Limited, Rampur State.
2. Bharat Starch and Chemicals Limited, 5 Royal Exchange Place, Calcutta.
3. The Anil Starch Products Limited, Ahmedabad.

Note.—A Joint Representation from all these three producers was received by the Board.

II. *Consumers—*

1. Messrs. Parry & Co., Ltd., Post Box No. 12, Madras.
2. Messrs. Pharmaceutical and Allied Manufacturers and Distributors, Post Box No. 214, Bombay.
3. Parle Products Manufacturing Company, Near Kalbadevi Post Office, Bombay.
4. Britania Biscuit Company, Bombay.
5. J. B. Mangharam & Sons, Karachi.

Of these, the first four replied.

III. *Importers—*

1. The Corn Products (India) Ltd., Post Box 994, Bombay.
2. The Sizing Materials Co., Ltd., Post Box 15, 137 Esplanade Road, Bombay.
3. Boots Pure Drug Co., Ltd., Nicol Road, Ballard Estate, Bombay.
4. P. M. Hutheesing & Sons, Ahmedabad.

Only the first two in this list replied.

APPENDIX II

List of persons who attended Oral Evidence.

I. *Producers—*

1. Mr. Kasturbhai Lalbhai, representing Anil Starch Products, Ahmedabad.
2. Dr. Van Gelder, representing Rampur Maize Products, Rampur.

II. *Consumers—*

1. Mr. A. E. Jones, representing Binny and Company, Madras.
2. Mr. Bracewell, representing Kohinoor Mills, Dadar, Bombay.
3. Mr. C. J. Soneji, representing E. D. Sassoon Group Mills, Bombay.
4. Mr. V. A. Ajagaoker, representing the Standard Mills, Bombay.

III. *Importers—*

1. Mr. Salzer, representing Corn Products (India) Limited, Bombay.
2. Mr. Stott, representing Sizing Material Co., Limited, Bombay.

IV. *Officials and Others—*

1. Mr. Dharma Vira, O.B.E., I.C.S., Textile Commissioner, Government of India.
2. Mr. S. W. Shiveshwarkar, M.B.E., I.C.S., Deputy Secretary to the Government of India, Department of Industries and Supplies, Bombay.
3. Mr. H. D. Doongaji.

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REPORT ON THE NON-FERROUS METALS INDUSTRY

CHAPTER I—PRELIMINARY

Reference to the Board.

The claim of the non-ferrous metals industry for protection and assistance was referred by the Department of Commerce, Government of India, to the Tariff Board for investigation and report in their Resolution No. 218-T(55)/45, dated the 3rd November 1945, *vide* Appendix I. The Resolution stated, *inter alia*, that, pending the formulation of a tariff policy appropriate to the post-war needs and conditions of the country and the establishment of a permanent machinery for investigating claims from industries, which had been started or developed in wartime and which were established on sound lines, to assistance or protection during the transition period. Recommendations for protection, if any, are to be limited to a period of three years by the end of which it may be possible to review the position in the light of conditions prevailing at the time. For the present the main object of our enquiries is to hold a summary investigation and to devise measures calculated to enable wartime and struggling industries to survive in the transition period, provided that the industry concerned gives fair promise of becoming self-supporting in the long run. For a detailed exposition of the policy, principles and procedure followed by this Board in the enquiries entrusted to it, a reference to our report on calcium chloride is invited.

Application for protection.

2. Initiative for the reference of the case of the non-ferrous metals industry to the Tariff Board was taken by Messrs. Kamani Refinery and Metal Industries, Bombay, which made an application for the purpose on the 15th September 1944, relying on the press note of the Government of India dated the 26th March, 1940, assuring protection to industries which were directly needed for the war effort and the development of which was essential for the war needs as also to industries which supplied the essential requirements of the civilian population. Some of the other firms which applied for protection were (1) the Prakash Engineering Company of Agra City—*vide* their letter dated the 11th June 1945—interested in brass and copper rods, non-ferrous castings and certain non-ferrous alloys, and (2) Messrs. Bombay Brass Works, Jullundar City, *vide* their application dated the 31st December 1945—interested in the manufacture of valves, taps and cocks of all sorts and generally in steam and sanitary fittings. The Kamanis are interested in arsenic copper rods, refining of scrap, production of alloys in various forms and rolling of rods and sheets. The Kamanis asked for an assurance of protection in the middle of the war period, but Government decided that the claim of the industry for protection should be examined by a Tariff Board in due course after the termination of war. In this connection it may be mentioned that the Planning and Development Department of the Government of India had appointed a Non-ferrous Metals Panel which went into the question of requirements and development of the industry as a whole and which has made certain recommendations which are now before Government for consideration. Possibilities of establishing a non-ferrous metals industry in India were also examined by the Metals Committee, appointed in 1942 by the Board of Scientific and Industrial Research and presided over by Sir J. J. Ghandy of the Tata Iron and Steel Company Ltd.

History of the Industry.

3. Although non-ferrous ores have been known to exist and have been worked in India since ancient times, the non-ferrous metals industry in its present or modern form is essentially a wartime development. It is known that copper at one time used to be smelted in large quantities in Southern India, Rajputana, Singhbum (Bihar) and the sub-montane regions of the Himalayas; but today, India is dependent for most of her requirements of copper upon supplies from abroad. Lead and zinc are reported to exist in many places, such as, Udaipur, Hazaribagh, and Singhbum; but, except for a small production of lead recently started, both these metals are imported from abroad. Similarly, although nickel and cobalt, used mainly for alloys, are known to exist in the ore form in Nepal, and tin is known to occur in Hazaribagh, all the three metals are at present imported. Among the pioneers in the exploitation of India's non-ferrous wealth by modern metallurgical methods may be mentioned the Indian Copper Corporation which commenced manufacturing copper from ore in 1924, as also brass ingots, sheets and circles from Indian copper in 1928. Another company which has played an important part in the development of the non-ferrous metals industry in India is the Indian Cable Company which was formed in 1920 for the purpose of manufacturing copper wire and strand for telephone, telegraph and transmission lines, rubber-insulated cables, and cotton-covered wires. Before the war, there was practically no other smelting and refining of non-ferrous metals or alloys nor fabrication of semi-finished products such as rods, sheets or wires. Even in the case of brass sheets, in which there was considerable local production from scrap, the indigenous output, including that of the Indian Copper Corporation, was barely sufficient to meet 40 per cent. of India's pre-war requirements. With the outbreak of the war, the country could not obtain a large part of essential supplies of non-ferrous metals and alloys including manufactures. The position was aggravated with the entry of Japan into the war, as supplies of tin from Malaya and of lead and zinc from Burma upon which India mainly depended were also cut off. This led to the setting up of factories for the refining of scrap which before the war used to be exported mainly to Germany and Japan. This enterprise, actively encouraged by Government, achieved considerable success, so much so, that to-day, the smelting and refining capacity of both yellow and white metal alloys is in excess of the present requirements of the country. The present smelting capacity per annum on the basis of 24-hour working is reported to be about 1,40,000 tons for both yellow and white metals against a total estimated demand of about 1,17,000 tons. The bulk of this capacity is in the yellow metals, the division being roughly 1,00,000 tons yellow metal and 40,000 tons white metal. Plans are in progress for electric furnaces which when installed are expected to yield an additional capacity of about 30,000 tons of yellow metals. Although there was some production of non-ferrous castings such as steam and sanitary fittings and engineering castings before the war, the industry received a strong fillip during the war and can now be said to have been established. Progress was not, however, confined to refining of scrap and manufacture of alloys and castings. The war witnessed the establishment of a second cable factory equipped with modern machinery as also of a rod mill having capacity for the production of enough black copper rods to feed both the cable factories in the country. The shortage of lead has revived the exploitation of the lead mines in the Jaipur and Udaipur States and the manufacture of pure lead ingots. There has been little progress in the development of our zinc resources, apart from the prospecting of the Zawar mines by the Utilisation Branch of the Geological Survey of India and latterly by the Metal Corporation of India Ltd.; but mention should be made here of the setting up of a de-tinning plant in Bombay

which seeks to recover tin from tin-plate scrap which otherwise used to be exported abroad. In this report we are not dealing with aluminium and antimony, two important non-ferrous metals, as they have been dealt with by us previously in separate reports.

Method of inquiry.

4. All the known producers of non-ferrous metals were addressed on the 24th January 1946 to submit their representations, with particular reference to the questionnaire issued for the purpose by the Board. The list of persons to whom the questionnaire was issued will be found in Appendix II. Similarly, a large number of consumers, *vide* Appendix III, were addressed with a view to eliciting their reactions to the claim for protection of and assistance to the non-ferrous metals industry. Importers were addressed to ascertain the volume of pre-war imports, the pre-war and present landed costs, the prospects of post-war imports and the probable demand of non-ferrous metals in the course of the next three years (Appendix IV). Amongst associations whose views were invited may be mentioned the Engineering Association of Calcutta, the Indigenous Manufacturers Association, Calcutta, the Metal Exchange Association, Ltd., Bombay, the Indian Merchants Chamber, Bombay, the All-India Muslim Chamber of Commerce and Industry, Bombay, the Indian Chamber of Commerce, Calcutta, the All-India Non-Ferrous Metalware Manufacturers' Association, Bombay, the South Indian Metal Distributors' Association, Madras, the Marwari Chamber of Commerce, Bombay, and the Indian Non-Ferrous Metals Manufacturers' Association, Calcutta. A list of factories visited by, or on behalf of, the Board is given in Appendix V. The names of factories which were costed to ascertain the cost of production with a view to comparison with landed costs of similar articles will be found in Appendix VI. Public inquiry into the case was held in Bombay from the 10th to the 16th September 1946. A list of the witnesses examined by the Board is given in Appendix VII.

Plan of report.

5. For the purpose of our report, we have divided the enquiry into four parts, namely :—

I. Production of primary or virgin metals from ores.

II. Production of secondary metals, the refining of scrap and the manufacture of alloys.

III. Semi-manufactures, such as sheets, circles, strips, bars, rods, pipes and tubes.

IV. Manufactures, such as wires, cables, conductors, water and steam fittings, castings for general engineering purposes, and sheet metal products.

We shall take up each of these categories one by one in the order mentioned above.

CHAPTER II—PRIMARY OR VIRGIN METALS

The list of primary metals dealt with.

6. In this chapter we deal with copper, lead, zinc, tin, nickel, chromium, cobalt, tungsten, and magnesium.

Copper : History occurrence and production.

7. The occurrence of enormous heaps of copper slag in various parts of the country testifies to the existence of a copper mining and smelting industry in days gone by. At all these places, copper was smelted from local ores and was used in the manufacture of copper alloys, such as brass, bronze and gun metal. At present, however, the Indian Copper Corporation is the only producer of virgin copper from ore. Its production is about 6,000 tons of refined copper per year. The smelter of the Indian Copper Corporation is situated at Ghatsila on the Bengal-Nagpur Railway in Bihar, and its mines are situated in the vicinity. The ore mined by the Indian Copper Corporation is comparatively of poor quality, the copper content being roughly 2 per cent. Veins have been found in which the copper content has been as high as 4 per cent., but the average is reported to be about 2 per cent. Although the Singhbum copper ore belt has been prospected and reported upon somewhat discouragingly by the Geological Survey of India, it seems possible that further examination and proving of the deposits in proximity to the existing mines of the Indian Copper Corporation might reveal other valuable ore reserves from which additional supplies of copper might be obtained. Other places where copper ore is known to exist in considerable quantities are the States of Sikkim, Mysore and Jaipur. Practically the whole of the copper produced by the Indian Copper Corporation is converted into brass by being melted in electric furnaces with the addition of proportionate amounts of zinc. The brass which is cast into blooms is rolled in the rolling mills into brass sheets, strips, and circles. The Indian Copper Corporation is a public limited company registered in London and managed by a Board of Directors in the United Kingdom. The shares of the company are quoted in India and it is stated that over 80 per cent. of the shares are held by Indian investors. The management of the concern is, however, vested wholly in a British Board of Directors. Extraction of copper at Ghatsila is entirely by the fire-refined process, there being no equipment for production of electrolytic copper. It is also said that the ore is not suitable for the electrolytic process owing to absence of precious metals, as also due to existence of impurities, especially nickel. There being no other centre of production of copper, all the electrolytic copper required by the country has to be imported from abroad.

Uses of copper.

8. Copper is by far the most important non-ferrous metal. It is used in large quantities in various electrical and engineering industries. The main features of pure copper are high electrical and thermal conductivity and malleability. Besides being used in its pure form, copper is alloyed with zinc and tin to produce yellow metals such as brass and bronze which have a very wide use n India for cooking utensils and other house-hold articles.

Copper : Domestic production and demand.

9. Having regard to the pre-war copper trade and possibilities of post-war development of electrical and other industries in the country, our estimate of the average annual requirements of copper during the next few years is as follows :—

	Tons.
Electrolytic copper	10,000
Copper for copper-base alloys other than brass ..	20,000
Semi-manufactures of brass and copper ..	40,000
Total ..	70,000

The total production during the same period is estimated at 7,000 tons per annum by the Indian Copper Corporation and about 5,000 tons per annum by recovery from scrap. It will thus be seen that the country will have to import annually something like 58,000 tons of copper, electrolytic as well as fire-refined.

Copper : Cost of production ; landed cost and case for protection.

10. The figures of cost of production of the Indian Copper Corporation were examined carefully by the Cost Accounts Officer deputed for the purpose by the Board. The result of our examination discloses the cost of production inclusive of profits to be Rs. 1,069 per ton—*vide* Appendix VIII. On the other hand, the landed cost of virgin copper at present is as follows :—

	Rs.	a.	p.
F.o.b. price, London, according to the London Metal Exchange (£ 84).	1,120	0	0
Cost of freight, insurance, etc. ..	180	0	0
Handling charges ..	20	0	0
Total landed cost ..	1,320	0	0

It will be seen from a comparison of the two figures, namely, the cost of production and the cost of importation, that the Indian Copper Corporation is well covered by the present import price of copper, without duty. The representatives of the Corporation who gave evidence at the inquiry admitted that the position was as described above and that there was for the present no case for the protection of the copper industry in India, even if the production of copper was taken by itself and not in the context of production of brass sheets and circles in which form only practically the entire output of the Indian Copper Corporation was put on the market. Since the reference of the case of the non-ferrous metal industry to the Board, the Indian Copper Corporation has made different requests at different times. At first, the Corporation viewed the removal of duty on copper, which was announced by Government on the 9th March 1946, with great concern and asked that either the duty should be reimposed or a subsidy should be paid equal

to the amount of the duty. Later, the Corporation withdrew this request on the ground that the world price of copper had risen and that at that price the production of copper in India was well covered. Its latest position is that, while no special protection or assistance is needed so long as the relation between the cost of production and the cost of importation remains what it is today, an assurance should be given to the industry that, in the event of this balance being upset to the detriment of the Indian Copper Corporation, the question of protection will be reconsidered. In dealing with the case of the Indian Copper Corporation, certain difficulties arise out of the constitution of the Corporation. That it is British concern with a wholly British Board of Directors somewhat detracts from its claim for protection, whatever may be the strict constitutional position. The Board enquired whether the Corporation had any plans for conversion of the sterling company into a rupee company and for reconstitution of the Board of Directors, and was informed that, although the Corporation had some such plans before the war, there is no such proposal for immediate consideration and that the Board of Directors of the Corporation in London has been carefully watching the situation. The Board wishes to emphasise that regard being had to the deficiency of India in copper, every possible step should be taken to encourage the copper-mining industry and that in any case care should be taken to ensure that the progress achieved so far in this direction is not retarded by making import of copper more attractive than extraction of copper from Indian ore. This situation should not, however, lead Government into extending any protection or assistance to a concern the management of which does not conform to the requirements which may be regarded as the minimum for becoming eligible for assistance at the hands of the Indian Government or at the cost of the Indian consumer. We would, therefore, take this opportunity to impress upon the management of the Indian Copper Corporation the desirability of converting the sterling company into a rupee company and the constitution of a Board of Directors in which the Indian investors will have a predominant voice. The Corporation should be given an assurance that, if the c.i.f. price of copper at an Indian port falls below the then cost of production of copper by the firm at Ghatsila, the Corporation will, subject to the fulfilment of the abovementioned condition, be entitled to ask for reconsideration of the case for protection or assistance. It is hoped that when this assurance is given, the Corporation will be able to go ahead with its plans for extension of the mining operations involving heavy capital outlay. It need hardly be added that the fact that the Corporation converts practically the whole of its copper into brass products will be a relevant consideration in the examination of the case for protection at the appropriate time. The import of copper unwrought and copper scrap free of duty should of course be continued.

Lead.

11. There was practically no production of lead in India before 1942-43 when it was started for the first time by the Metal Corporation of India, Ltd., Calcutta. Till then, Burma was the chief supplier of India's lead requirements. During the war, the Burmese supplies were cut off and India had to depend mainly upon Australia for its requirements. Lead ore is mined in many countries in association with zinc ore. The U. S. A. is the most important source and contributes roughly one-third of the annual world output. The other producers of lead are Australia, Mexico, Canada, Germany, Spain and Burma. There is at present no duty on lead ingot and lead scrap. Lead has been known to occur in a number of places in India, such as Hazaribagh in Bihar, Drug in the Central Provinces, Datia and Gwalior in Central India, and Udaipur and Jaipur in

Rajputana. The only lead deposits which are being exploited at the moment are the Zawar mines in the Udaipur State and the Banjari mines in the Jaipur State in Rajputana. Both these deposits are controlled by the Metal Corporation of India, which proposes to carry lead concentrates from Rajputana to its smelter at Tundoo near Dhanbad in Bihar. So far, the Metal Corporation has produced only about 150 tons of lead from handpicked ore, but it has installed machinery and equipment which will enable it to produce 6,000 tons of lead ingot per year with effect from the middle of 1947. As the production achieved hitherto has not been on any commercial scale, it has not been possible to ascertain the cost of production with a view to making a comparison with landed cost of lead in order to see what measure of protection, if any, would be necessary. The estimated cost of production as anticipated at present by the Company is Rs. 427 per ton of lead ingot as against the landed cost of Australian lead of Rs. 860. The Indian cost may go down still further if the associated zinc ore could also be commercially exploited. The representative of the Metal Corporation stated before the Board that it would not be possible for him to say definitely what his cost of production would be next year, but that; if the world price of lead remained as high as it is today, the Indian production could be achieved at less than the landed cost, there being then no necessity for a protective duty. The Indian requirements of lead are estimated to be 15,000 to 18,000 tons per annum, whereas the Indian production would in the course of the next three years, hardly exceed 6,000 tons per annum. There will thus be a considerable gap between the home production and the home requirements which will have to be bridged by imports from abroad. As lead is required mainly for industrial purposes and for manufacture of pigments ; it is but right that it should be made available to the consuming industries at as low a cost as possible, and this can be done only if there is no duty, revenue or protective, on lead. The present position according to which there is no duty on lead ingot and lead scrap is, therefore, satisfactory and should be continued. Since, however, it is essential that production of lead in India should be stepped up so as to be able to meet the entire demand, we would recommend that Government should make a formal declaration that the case of the lead industry for assistance will be considered sympathetically during the next three years provided that (1) the production of lead is carried on scientific and sound business lines and (2) the cost of production of Indian lead is found, on strict cost accounting, to be unremunerative as compared with the cost of importation of lead at the time of such examination. It is hoped that with this assurance lead production in India will receive a stimulus and that, in course of time, the country will become self-sufficient in respect of lead supplies. A word may perhaps be added here to explain why it is economical to have the smelter at Dhanbad although the mines are so far away (1300 miles) in Rajputana. The freight on ore from the mines to the smelting factory works out to Rs. 30 per ton. In order to get one ton of metal, one and a half tons of concentrated ore are required. On this basis, the freight on ore for one ton of metal comes to Rs. 45. As against this, if one ton of metal itself were transported from the mine-head to Calcutta, the freight on metal will be Rs. 67, it being only slightly less for delivery at Dhanbad. Thus, from the point of view of freight, it is desirable that the smelter should be nearer the centre of consumption of lead as also the source of supply of coal, than at the mines themselves. As for the possibility of maintenance of lead supplies from the Zawar mines, the Board gathered from the representative of the Metal Corporation, which was subsequently verified by an officer of the Geological Survey of India, that in Zawar there are four hills containing lead, of which so far only one hill has been developed. *Prima facie*, there appears to be good prospect of a steady flow of lead concentrate

to feed the smelter at Tundoo for some years to come. The representatives of the Metal Corporation requested that assistance may be given to them by way of issue of import licences for securing certain machinery from U. S. A. in preference to the United Kingdom, as the U. S. A. deliveries were much quicker than those from the United Kingdom. We recommend that all these facilities should be given including the necessary dollar exchange. The lead produced in India by the Metal Corporation is stated to be 99·9 per cent. pure, which is as good as any imported from abroad.

Imports of lead into India from 1937 were as follows :—

	Tons.
1937	7,000
1938	6,400
1939	12,500
1940	14,000
1941	16,000
1942	9,006
1943	14,007
1944	22,003
1945	9,000

The trend of world prices of lead may be seen from the graph in Appendix IX.

Zinc.

12. There is no production of zinc in India, nor is it likely to be produced in commercial quantity during the next three years. Zinc is found in the Zawar mines in the Udaipur State in association with lead which is already being commercially exploited, but it is not clear as to whether the Metal Corporation will make zinc oxide or use the zinc portion of the ore in any other manner. The Indian requirements of zinc are 50,000 to 60,000 tons per annum, including the consumption of zinc oxide. The total quantity of zinc ore proved so far at Zawar is said to be about 30,000 tons, capable of yielding about 6,000 tons of zinc, which indicates the poverty of India in zinc and dependence of the country on imports for its requirements of this metal. Zinc is used mainly in alloys, and particularly in the production of brass. Zinc is also used for the galvanization of steel sheets and wires. The third principal use of zinc is in the manufacture of pigment, for which purpose it is required in the form of zinc oxide. Both before and during the war, zinc has been imported from Australia which continues to be the main source of India's zinc supplies. The biggest producer as well as the biggest consumer of zinc in the world is the United States of America. There being no zinc industry in India, and zinc being required as a raw material in a number of industries, there has been no duty on zinc and that position is satisfactory and should be continued. There should be no duty on zinc ingots, slabs, blocks, or bars. There should be no duty on zinc scrap which should also be imported to supplement our zinc resources.

13. **Tin.** There is no production of tin in India, nor have any large tin deposits been found or proved. Before the war, India used to depend upon Malaya for the supply of tin; during the war, the supplies were controlled by the International Tin Control Board, and India had to receive her quotas through the United Kingdom Ministry of Supply. India's quota was fixed at about 2,000 tons per annum in the light of pre-war consumption. The consumption of tin in India before the war was on an average 2,500 tons a year.; whereas the estimated post-war consumption is 6,000 tons, the increase being chiefly accounted for by the development of the alloy industry in wartime. Tin is used mainly in (1) manufacture of tinplate and (2) production of alloys, such as solder, type metal, anti-friction white metal, bronze and gunmetal. There is at present a specific revenue duty of Rs. 375 per ton of tin. The landed cost of tin, inclusive of customs duty, is made up as follows :—

	Per. ton Rs. a. p.
F.o.b. price (London)	5,020 0 0
Freight, insurance, etc.	214 11 0
Handling and clearing charges	11 8 0
Duty (specific)	375 0 0
Total landed cost (inclusive of duty) ..	5,621 3 0

The releases of tin are at present controlled by Government and the rate at which tin is issued to consumers is at Rs. 316-4-0 per cwt. or Rs. 6,324 per ton which includes an addition of 12½ per cent. on landed cost representing handling charges by Government. Since there is no tin industry as such in the country, consumers of tin have represented that assistance should be given to them by (1) removal of duty on tin, (2) securing a higher quota for India by direct negotiation with the International Tin Control Board instead of going through the British Ministry of Supply, (3) removal of duty on tin scrap, and (4) ban on export of tin and tinplate scrap from the country. If our alloy industry is to compete successfully with import of alloys from abroad, then the price at which alloy manufacturers in India get their requirements of tin should be more or less the same as the price at which manufacturers of alloys receive their tin, for instance, in the United Kingdom. Removal of duty on tin and tin scrap, therefore, appears to be the first action that should be taken to put manufacturers of tin-based alloys in India in parity with foreign manufacturers; and we recommend that the duty on tin and tin scrap should be removed. Similarly, there is no reason why India, in the context of the new status which she has now acquired should be tied to the United Kingdom for her tin requirements and why this country should not have direct access to the International Tin Control Board for its full share of tin. Every attempt should be made to have the Indian quota raised from 2,000 tons to a figure approaching 6,000 tons which can be easily absorbed if available. The request for a ban on export of tin scrap will be considered when we come to the general question of export of scrap of all kinds which should be prohibited in order to conserve our metal supplies as also to provide our refining industry with the

requisite raw material. Considering our shortage of tin, the de-tinning industry deserves mention. A de-tinning factory has been set up in Bombay by Messrs. Adamji Lookmanji which is an associate firm of the Indian Standard Metal Works and is said to have been working economically during the war. Such industries are known to exist in other countries where deficiency in tin is experienced, e.g., the United Kingdom, the United States of America, and Germany. The local de-tinning industry will be assisted if (1) the duty on tinplate scrap is removed and (2) export of tinplate scrap from India is prohibited.

Nickel.

14. There is at present no nickel industry in India, there being no known large-scale nickel deposits. We are dependent for our nickel supplies upon Canada which is the principal source of nickel in the world. Our requirements of nickel are estimated to be 2,000 tons, the bulk of which is consumed by the Mint for coinage purposes. Nickel is used by steel companies in the production of alloy steels. Nickel is also required in the production of nickel silver, cupro-nickel, and certain other non-ferrous nickel alloys. Nickel is required in the electro-plating industry in the form of nickel anodes. Nickel is also required for the production of nichrome wire which is mainly used for electrical appliances. There is at present a duty of 30 per cent. on nickel and nickel alloys, including nickel silver. The Tata Iron and Steel Company, Ltd., represented that the duty on nickel should be removed in order to encourage the production of alloy and special steels which they were manufacturing but in regard to which they were handicapped by the duty on nickel. India is deficient in the production of alloy steels. There is no duty on nickel in countries which do not manufacture nickel, such as Australia and the United Kingdom; and what the representative of the Tata Iron and Steel Company asked was that India should be placed in an equally advantageous position in regard to the price of nickel. Certain manufacturers of non-ferrous alloys and consumers of nickel anodes also urged that the duty on nickel should be removed with a view to encouraging the alloy industry as well as the electroplating industry. This request was reinforced by a representative of the Mond Nickel Company who attended the public inquiry and who pointed out that his company had made a request to this effect to the Government of India which in turn had passed the request to the Tariff Board, presumably for consideration along with the case of the non-ferrous metals industry for protection or assistance. The representative of the Mond Nickel Company laid stress on the fact that the Finance Member of the Government of India had stated in his Budget Speech of the 28th February, 1946, that Government intended to give relief by way of removal of customs duty on raw materials not manufactured in India but required by consuming industries. He also mentioned that his firm had maintained a steady price for nickel throughout the war as also throughout all the markets of the world and that levy of duty in India placed industries consuming nickel in a position of disadvantage as compared with similar industries in the other countries of the world. He pointed out that the price of nickel which was £ 180 per ton in 1937 was raised to £ 190 per ton in September 1939, and that it has remained steady ever since. He argued that the case of nickel was on all fours with that of zinc which was imported duty free, there being no zinc industry in the country and zinc being required for alloys much the same as nickel was required. The Board is satisfied that there should be no duty on nickel required for non-ferrous alloys, for electro-plating and for the production of nichrome wire. Removal of duty on nickel required for the production of special alloy steels and nickel alloys made by the Tata Iron and Steel Company, Ltd., would have been considered while examining the case of that particular industry

for protection and assistance. The removal of duty on nickel required by one industry while maintaining the duty on nickel required for some other industry would, however, create complications and cause administrative inconvenience which would not be worthwhile especially when it is realised that the bulk of nickel imported into the country is consumed by Government in whose case removal of duty would be but a book adjustment rather than loss of revenue. The percentage of nickel used in non-ferrous alloys is flexible and it would be possible for an alloy producer to consume less nickel and yet to claim rebate on a larger quantity. For these reasons and in view of the fact that removal of duty on nickel imported into India would place consumers of nickel in India on a competitive basis with similar producers in other countries, notably the United Kingdom, we recommend that the duty on nickel should be removed, although the duty on nickel alloys should remain at the present level, i.e., 30 per cent. *ad valorem* but protective rather than revenue.

Other non-ferrous metals.

15. The other non-ferrous metals that may be considered are cobalt, chromium, tungsten and magnesium. None of these metals is made in India and, therefore, there is no question of the protection of industries producing them. The metals are used in alloys and their case is comparable to that of zinc, tin, and nickel. The quantities required are small and the revenue likely to be sacrificed insubstantial. On the other hand, the encouragement which the removal of the duty will give is likely to be great and will, in the opinion of the Board, outweigh considerations of revenue. The case for the removal of duty on cobalt was pressed by the representative of the Tata Iron and Steel Company and the case for the removal of duty on magnesium was urged by Industrial Importers and Engineers, Ltd., Calcutta, who have recently been given a licence for import of magnesium from Canada. Magnesium is used in the production of aluminium magnesium alloys. The consumption of magnesium during the war was about 500 tons although the pre-war consumption was probably much less. The consumption of cobalt is roughly 20 tons. Cobalt is used (*a*) in the steel industry and (*b*) in the form of cobalt salts in the manufacture of glass. Tungsten is required for manufacture of high speed steel but figures of consumption are not readily available. Consumption of tungsten should not exceed 50 tons a year. Chromium is used for chromium plating and for the production of die steel and stainless steels. The duty (at present 30 per cent. *ad valorem*) on all these metals should be removed as (1) they are raw materials for other industries, (2) they are not produced in India, (3) they do not yield substantial revenue and (4) it is desirable to put the Indian producers of alloys of these metals on a competitive basis with producers in other competing countries like the United Kingdom. An additional reason why we recommend removal of duty on magnesium is that the raw materials for the production of magnesium are available in the country but their exploitation will depend upon the use of magnesium and creation of a demand for the metal. Should the metal be imported free of duty, its consumption will grow and, with the creation of this demand, it is likely that a magnesium industry may be established in the country, taking advantage of the availability of the raw materials which are magnesite and dolomite. It is hardly necessary to add that this concession of removal of duty should exist only so long as there is no production of these metals in this country.

CHAPTER III—SECONDARY METALS, ALLOYS AND REFINING OF SCRAP

List of secondary metals dealt with.

16. Secondary metal may be defined as metal recovered from commercial scrap, that is scrap that has entered the processor's plant in scrap form. In contrast to virgin or primary metals, i.e., metals extracted from ores, secondary metals are of a secondary origin and result from the use of primary metals and alloys. Amongst alloys which will be considered here are brass, bronze, gun metal and white metals of all kinds. The refining process is comparatively simple although the sorting and segregation of scrap is somewhat difficult and laborious. Usually, coke-fired pit furnaces and oil and coke-fired tilting furnaces are used for the melting of scrap, and the machinery required for the purpose is of a simple nature. In addition to the above mentioned furnaces, oil-fired reverberatory and rotary furnaces and electric furnaces are also used for the purpose. Kettles are used for white metals and soft alloys. The raw materials used in the refining process are (1) scrap metals, residues and ashes from various smelting and engineering shops, (2) rejected domestic utensils, (3) cuttings and borings of metals and alloys and (4) virgin metals required to attain the desired composition. The raw materials are partly indigenous and partly imported. The manufacture of standard alloys from scrap is the most important function of the secondary metal industry. In almost all cases, it is necessary to add some amounts of virgin metals to the scrap composition in order to bring it to a standard specification. The secondary metal industry is located mainly in Calcutta and Bombay with fairly important units in Jaipur, Meerut, Mirzapur and Madras. The leading members of the secondary metal industry are (1) Binanis of Calcutta, (2) Kamanis in Bombay and Jaipur, (3) Bengal Ingot Company, Calcutta, (4) Eyre Smelting Works, Calcutta, (5) Indian Smelting and Refining Company, Bombay, (6) Bombay Metals and Alloys, Bombay, and (7) Indian Standard Metal Works, Bombay, to mention only a few names. Their main activity is production of brass and gun metal ingots and white metal alloys.

Brass ingots.

17. The most important alloy that came up for consideration was brass. Brass is an alloy of copper and zinc ordinarily in the proportion of either 70 : 30 or 60 : 40. The 70 : 30 brass is required mainly for engineering purposes whereas the 60 : 40 brass is used for domestic purposes and is therefore a more common variety. Manufacture of brass has been in existence in India almost in every part since ancient times, but mostly on a cottage industry scale. Manufacture of brass was also resorted to by hereditary artisans engaged in the costing of brass and bell-metal wares. Apart from these cottage workers, there were one or two factories engaged in the refining activity. Prior to war, large quantities of scrap in all forms were being exported to refineries overseas. Countries like Germany, Japan and U.K., which used to import all such scrap, sorted and graded the same and resold the material to refineries which utilised it in the production of various industrial alloys after refining and sweetening with virgin metals wherever required. These alloys came back to India for industrial and domestic consumption, there being no organization in the country for a proper utilisation of the scrap and for the production of the alloys. Appendix X gives a statement of exports of metals (mainly scrap) from India in the pre-war period. The war, however, witnessed the installation of smelting and refining capacity which, as mentioned previously in the report, is more than sufficient to meet the

requirements of the country in respect of both yellow metal and white metal alloys. In fact, the capacity has increased to such an extent that it is necessary, firstly to prohibit export of scrap from the country, and secondly to encourage import of scrap by removal of duty on scrap of all kinds. Although the refineries which were set up during wartime were not directly encouraged by Government, they received indirect support in the form of orders, especially from Ordnance factories and railways. The refineries also catered to the requirements of the general engineering industry in the country in the matter of alloys and castings. The Indian Copper Corporation which was started in 1924 converts, as mentioned previously, practically all its copper into brass which is again rolled into sheets and circles which will be considered in the chapter dealing with semi-manufactures. The quality of the alloys made in India is satisfactory, no complaints having been received either from railways or from the general engineering industry. The Indian requirement in respect of the yellow metal is estimated at 96,500 tons per annum (*vide* Appendix XI) whereas the Indian productive capacity is estimated at about 1,00,000 tons per annum (*vide* Appendix XII) and is likely to be raised to 1,30,000 tons in the near future with the installation of electric furnaces which are already on order. These figures are inclusive of 10,000 tons of brass manufactured by the Indian Copper Corporation. Before the war, the Indian requirements of yellow metal were about 37,000 tons per annum.

Protection of the brass ingot industry.

18. (1) Under article 70 of the Tariff Schedule, brass ingot is subject to a revenue *ad valorem* duty of 30 per cent. Recently Government announced removal of duty on brass scrap and brass ingot in pursuance of its general policy of making raw materials available to consuming industries at as low a cost as possible, but immediately there was a protest against this action by persons engaged in the secondary metal industry. The case was reviewed by the Commerce Department of the Government of India, and it was decided that, pending receipt of the report of the Tariff Board, the duty on brass ingot would remain. The present position, therefore, is that, while there is no duty on brass scrap, there is a 30 per cent. duty on brass ingot. In fact, considering that the case of the non-ferrous metals industry had been referred to the Tariff Board as long ago as November 1945, no action should have been taken to remove the duty on brass ingot without a previous reference to the Tariff Board. Some persons interested in the import of brass ingots forcibly complained that the action of Government in removing the duty in the first instance and reimposing it within a short period has created complications in regard to forward contracts entered into by them and the Board pointed out that this was a matter to be taken up by the persons concerned with Government and that it was not one on which the Board could be asked or induced to pronounce an opinion. The case of duty on brass ingot was considered by the Board particularly and at great length, opportunity having been given to the conflicting interests to state their views as fully and frankly as possible.

(2) The case for the removal of duty may be summed up as follows :—

(i) There is hardly any distinction between brass scrap and brass ingot and therefore both the materials should be treated alike ; if there is no duty on brass scrap, there should be no duty on brass ingot.

(ii) The refining industry is hardly an industry, the equipment used being indigenous, inexpensive and simple. The process of making brass ingot is also simple and one of the manufacturers stated that given duty-free scrap he could easily compete with duty-free imported ingot.

(iii) There is scarcity of scrap in the country with the result that it has to be imported, the import price being almost the same as the price at which readymade ingots could be imported : that being so, the country might as well import ingot in preference to scrap and save conversion charges to the consumers.

(iv) If there is a duty on brass ingot, the price of brass ingot will tend to rise, causing harm to the cottage workers who require brass ingots for the manufacture of hollow-wares used by the common people.

(v) If there is duty on brass ingot, (*a*) the local refining industry will scramble for all the available scrap, thereby squeezing out cottage workers who mainly depend upon this scrap by way of raw material for their products and (*b*) the price of scrap in the country will rise to the detriment of the Indian cottage workers.

(vi) Lastly, it was argued on behalf of those who advocated removal of duty on brass ingot that the quality of imported ingot was better than that of the locally manufactured ingot, and that any duty would be an additional burden on those who needed imported ingot for the manufacture of finished goods, such as cocks, taps, fittings and cast utensils.

(3) On the other hand, representatives of the brass ingot industry contended that all advanced countries had a refining industry and now that a refining industry had been established in the country due to the stress of war, it should be protected during the transition period and its expansion encouraged.

India is deficient in metals and should find means of utilising all available scrap rather than allowing it to be exported to countries where it would be refined and returned back to India in the forms of alloys and even ingots. The ingots produced by the Indian manufacturers would not prejudice the cottage workers who used brass scrap directly for the production of castings rather than ingots. Brass ingots mainly in bloom form are used for rolling rather than for castings by cottage workers and therefore the fear of the cottage workers that imposition of duty on brass ingot will affect their trade is far-fetched.

(4) After having heard the arguments advanced by both sides and having examined the pros and cons of the subject, the Board has come to the conclusion that the refining industry is an essential stage in the development of the non-ferrous metals industry in the country, and must therefore be assisted to survive in the transition period by the imposition of as low a protective duty as possible, it being clearly understood that the industry should be so organised in the meantime that it should be able to stand on its own legs at the end of the protection period, i.e., without any duty.

(5) The Board examined the estimate of cost of production of brass ingots furnished by the Indian Non-ferrous Metals Manufacturers' Association. The Association's estimate is as follows :—

	Rs. per cwt.
Scrap price	47·50
Burning loss at 5 per cent.	2·40
Manufacturing charges	11·20

The Board's estimate, arrived at after scrutiny of items of cost and taking into account the cost of the most efficient and economical units, is as follows :—

	Rs. per cwt.
Scrap price	45
Burning loss	2
Manufacturing charges	6
	53

(6) The landed cost ex-duty of brass ingot imported from U. K. which is the main source of supply is worked out as follows :—

	£. per ton.	*Rs. per cwt.*
Brass (60 : 40)	65	43 5 4
Freight, insurance and clearing charges ..	5	3 5 4
Total landed cost ..	70	46 10 8

(7) Brass ingots imported from U. K. are thus cheaper by Rs. 6-5-4 per cwt. (Rs. 53 minus Rs. 46-10-8 = Rs. 6-5-4), compared with the best cost of production in India. These figures suggest a duty of 13·6 per cent. (100 × 6·33 divided by 46·67).

(8) Regard being had to the possibility of a somewhat lower landed cost or a slightly higher cost of production than assumed by us, the Board recommends that a protective duty of 15 per cent. be levied to safeguard the home industry. The rate of duty should be adjusted under Section 4 of the Indian Tariff Act if the landed cost inclusive of duty tends to fall below Rs. 53 per cwt. This will mean a reduction by half of the existing revenue duty. This action will, while safeguarding the indigenous industry, meet the cottage workers half-way in allaying the fears referred to above. Brass ingot should be defined, in order to avoid importation of alloys other than brass ingots which may be subject to a higher customs duty, as follows :—

Brass ingot on analysis may be found to contain—

(*a*) copper 55 to 74 per cent.

(*b*) zinc 26 to 42 per cent., and

(*c*) components other than copper and zinc, including impurities, not to exceed 3 per cent. of which not more than one-half should be tin.

Yellow metal alloys other than brass.

19. We have included all the yellow metal alloys other than brass in one category for the purpose of protection. This category will include gun-metal, bronze, bell-metal and phosphor bronze. There are generally two types of gun-metal alloys, viz., (1) copper 88 per cent., tin 10 per cent., and zinc 2 per cent., and (2) copper 85 per cent., tin 5 per cent., zinc 5 per cent., and lead 5 per cent. Other yellow metal alloys, less commonly met with, have slightly different compositions as will be seen from the list of alloys given in Appendix XIII. The total requirements of

these alloys (i.e., yellow metal alloys other than brass) come to approximately 15,000 tons per year, for which there is ample productive capacity in the country. These alloys are used mainly by Railways and for general engineering castings. We have taken the cost of production and the landed cost of gun-metal as representative of this group of alloys. The estimated cost of production in India is as under :—

Gun-metal

	Composition 88 : 10 : 2.	*Composition* 85 : 5 : 5 : 5.
	Rs.	Rs.
Raw materials ..	93·80 (69·90)	78·75 (63·00)
Freight, melting loss, manufacturing charges, etc.	13·00 (10·00)	12·50 (10·00)
Total ..	106·80 (79·90)	91·25 (73·00)

Note.—The figures in brackets in the above table denote the estimated cost in the U.K. and before the receipt of the latest estimate.

We figured out the conversion charges of gun-metal in the U.K., and found them to be Rs. 10 per cwt. against Rs. 13 and Rs. 12·50 claimed by the Indian Non-ferrous Metals Manufacturers' Association and accepted by us. Since then, we are advised that prices have gone down and now the latest estimated landed cost ex-duty of gun-metal (composition 88 : 10 : 2) is Rs. 75 per cwt. whereas that of the gun-metal (composition 85 : 5 : 5 : 5) is Rs. 63 per cwt. We have adopted these latest estimates for the purpose of assessing the measure of protection required. In the case of the first gun-metal (composition 88 : 10 : 2), a duty of 40 per cent. will just bring the landed cost to Rs. 105 per cwt. as against the Indian cost of Rs. 106·80. In the case of the other type of gun-metal, a duty of 40 per cent. will raise the landed cost to Rs. 88·2 against the indigenous cost of Rs. 91·25. It will thus be seen that even a duty of 40 per cent. will fall short of the landed cost. This duty is necessary to give a chance to the local industry to survive. A little margin is left to the disadvantage of the home producer, which may be regarded as an incentive for improvement and reduction in cost. This duty of 40 per cent. should be a protective duty valid for three years in place of the existing revenue duty of 30 per cent. The higher Indian cost is due to the higher cost of raw materials in India, a factor over which the industry has no control. The principle of fair competition requires that this disparity should be made up by an import duty. We have endeavoured to keep the duty on gun-metal as low as possible in view of its use as bearings and as parts of machinery.

White metal alloys.

20. (1) The alloys of tin, lead, antimony and copper in varying proportions are known as white metal alloys. The most important alloys of this group are—

(*a*) Tin solders.

(*b*) Anti-friction white metals, and

(*c*) Type metals.

The total demand for these alloys is approximately 15,000 tons per annum whereas the productive capacity in the country is about 40,000 tons per annum (*vide*

Appendix XIV) indicating that the entire demand can be met from local production provided that the raw materials are made available and the alloy industry is protected against unfair competition from abroad.

(2) Tin solder is an alloy of tin and lead in varying proportions. The demand for this alloy in the country is 3,000 to 4,000 tons per year. The cost of production of Indian solder comes to Rs. 193·80 made up as follows :—

	Rs. per cwt.
Raw materials	180·80 (118·30)
Freight, melting loss and manufacturing charge.	13·00 (11·70)
Total ..	193·80 (130·00)

Note.—Figures in brackets indicate the building-up of the U.K. cost before the receipt of the latest estimate.

Here again the latest estimates of landed cost are somewhat lower. The latest estimate of landed cost ex-duty of tin solder 50 : 50 comes to Rs. 120 per cwt. imported from U.K. We have adopted this figure for the purpose of measuring the required protection. There is at present a revenue duty of 30 per cent. The Non-ferrous Metals Manufacturers' Association has suggested a duty of 60 per cent. which will yield a landed cost of Rs. 192 per cwt., but the Board is not inclined to recommend a duty higher than 50 per cent. which should be sufficient, when the recommendation of the Board made elsewhere for removing the duty on tin is given effect to by Government and when the industry is developed so as to make reduction in costs of production possible. It should be mentioned that the cost of raw material has been calculated on the basis of the present price of tin, viz., Rs. 316-4-0 per cwt. We are told that the issue price of tin in the U.K., is Rs. 200 per cwt. The higher price in India cannot be accounted for by the duty of Rs. 375 per ton on tin in India. The bulk of the difference is really due to a lower price for issue of tin in the U.K. than the price at which India is able to obtain her requirements. It is not known whether the United Kingdom is subsidising the issue of tin, or whether the low price is due to the averaging of purchases made at different times and at different prices, but what matters is that the U.K. manufacturer of tin solder gets his raw material at a much lower price than it is possible for the Indian manufacturer. It has been calculated that, if the issue price in India were the same as in the U.K., then even the existing duty of 30 per cent. would be generous for the protection of the Indian producer. The alternative to the higher duty on tin solder in India is subsidisation of tin as in the U.K., but considering that our requirements of tin are comparatively small and that the incidence of solder and other white metal alloys on the cost of the job in which they are used is small, we prefer the protection of the Indian industry by means of an adequate duty to subsidisation of issue of tin. The duty should be protective and valid till the end of March 1950.

Other white metals.

21. In these alloys tin is the predominant constituent, being 90 per cent. in one alloy and 60 per cent. in another alloy. The total demand for these alloys comes to about 7,000 tons, which is amply covered by indigenous production capacity. The estimated landed cost ex-duty of 90 per cent. tin content white metal is Rs. 200 per cwt., whereas the estimated landed cost ex-duty of 60 per cent. tin

content white metal is Rs. 154 per cwt. The estimated cost of production of the same alloys in India is Rs. 318 and Rs. 250 per cwt., respectively. The conversion charges are small and over 90 per cent. of the cost is the price of raw materials, mainly tin. Here again, the disability of the Indian producer is the same as in the case of tin solder. Really speaking, a duty of 60 per cent. would be necessary to cover the indigenous cost of production, but, for the reasons given in respect of tin solder, we do not recommend a duty higher than 50 per cent., which we think should be sufficient to protect the indigenous industry. We are in favour of keeping this duty, as also the duty on gun-metal, as low as possible in view of its use in parts of machinery such as bearings. It must, however, be noted that the duty of 50 per cent. is recommended on the clear assumption that the duty on tin will be completely removed. The duty should be protective and valid till the end of March 1950.

Type metals.

22. Our recommendation in regard to tin solder and tin-base alloys should not apply to typemetal, which should be treated as a separate item in the Tariff Schedule. This metal is at present subject to a revenue duty of 30 per cent. The type metal is an alloy of lead, antimony and tin. If the duty on this alloy is raised, there is a danger that import of type metal may be substituted by import of types to the detriment of the indigenous type making industry. Types are required by the printing trade, and we think that it will be undesirable to raise the price of type. We have dealt with the case of antimony in a separate report, and we feel that, if action is taken as recommended by us, and the duty on tin is removed as suggested in this report, then the revenue duty of 30 per cent. on type metal may remain without risk to the indigenous type metal industry, but it should be protective in place of revenue.

Mazak.

23. Mazak is an alloy of zinc and aluminium in the proportion of 96 and 4. It is not produced in India, and we are told that it is not likely to be produced in India in the next few years. The alloy is used for die-casting. The total demand is estimated at 1,000 tons per year. During the war, mazak was used by some persons as zinc, which was an abuse of the alloy, but now that zinc is available freely, this abuse is unlikely. It was urged on behalf of the Non-ferrous Metals Manufacturers' Association and other interests present at the enquiry that, if mazak is permitted free of duty, the die-casting industry will receive a great stimulus, which will be all to the benefit of industrialization in India. When zinc is free of duty and mazak is 96 per cent. zinc, there can be no objection to the removal of duty on this alloy. The Board is impressed by these considerations and recommends that the duty on mazak be removed so long as it is not produced in India.

Remaining alloys.

24. Duty in respect of alloys not dealt with above should continue as at present, i.e., 30 per cent. *ad valorem*, but made protective. In this category will fall nickel silver, cupro-nickel, nickel alloys, etc. In fact, it is easier to catalogue the alloys which should be covered by a special duty, leaving the other alloys under an *ad valorem* protective duty of 30 per cent. The alloys to be treated specially are (*a*) brass ingot, 15 per cent.; (*b*) gun-metal alloys, 40 per cent.; (*c*) white metal alloys including tin solder, 50 per cent.; and (*d*) mazak, free of duty.

CHAPTER IV—SEMI-MANUFACTURES

List of semi-manufactures.

25. In this Chapter we deal with semi-manufactures such as sheets, circles, strips, rods, wires other than electrolytic copper wires used for cables and conductors, tubes, pipes, sections, etc.

Development of rolling.

26. The production of sheets and circles was developed mostly during the war except in the case of the Indian Copper Corporation which started its rolling operations in its Ghatsila Works in 1928. The stimulus for the sheet rolling mills came from the development of the secondary metal manufacturing and refining industry in India which provided the raw materials for the rolling mills. The industry is situated mainly in Calcutta and Bombay. Almost all the mills which have been set up recently were fabricated locally and have been working on a make-shift basis until they can be replaced by up-to-date mills from abroad with the removal of wartime import restrictions. The prominent pre-war producers of brass sheet are Devi Dayal & Sons, Bombay (1935) and General Metal Industries, Mirzapur (1938). Prominent among rolling mills established in wartime may be mentioned, (1) the India Rolling Mills, Calcutta, (2) the Binani Metal Works, Calcutta, (3) the Kamani Metals & Alloys, Bombay, and (4) the Metal Rolling Works, Bombay. Plans for installing modern and up-to-date plants have been made by (1) the Indian Copper Corporation, additional capacity of 10,000 tons, (2) Kamani Metals & Alloys—additional capacity 5,000 tons immediately and 15,000 tons later, (3) the Indian Smelting and Refining Co., Bombay—additional capacity 6,000 tons immediately with a further addition of 8,000 tons within a couple of years, (4) Devidayal & Sons, Bombay—additional capacity 6,000 tons and (5) Messrs. India Rolling Mills, Calcutta—additional capacity 8,000 to 10,000 tons. Other firms, such as Binanis, have also plans for additional rolling capacity. Over and above these organised sheet rolling mills, there are several small units scattered throughout the country, mostly in Bombay, Punjab, United Provinces, and Madras, working on a semi-cottage scale. Rods and bars are at present made by rolling and drawing, but at least one extrusion plant is likely to be established in the near future at Calcutta with a capacity to meet all the requirements of the country in this line. There is also an extrusion plant in the Katni Ordnance Factory which is now undertaking job work on behalf of civilian producers. Amongst main producers of rods and bars are (1) the India Rolling Mills, Calcutta, (2) the Binani Metal Works, Calcutta, (3) the Jaipur Metal Industries, Jaipur, (4) The National Screw and Wire Products, Calcutta, (5) Jayant Metal Manufacturing Company, Ltd., Bombay, and (6) Steel and General Mills Co., Ltd., Lahore. In so far as tubes and pipes are concerned there was no large-scale production in India before the war. This capacity has been developed during the war under the stimulus of the difficult shipping situation and the growth of demand created by the war. Tubes and pipes are made best and most economically by extrusion process. But as no extrusion plant was available, these articles were made by the cored-shell method by which tubes are drawn on a bench. The only known producer is the National Copper Tube Manufacturing Co., Karachi, although the firm of the National Pipes and Tubes Co., Ltd., Calcutta, has recently erected a plant for the manufacture of these products. The D. Waldie & Co., Calcutta, installed an extrusion press near Calcutta in the early years of the war for the production of lead pipes. The products of this press are up-to-date and according to standard specification.

As for the non-ferrous wires other than electrolytic copper wires used for cables and conductors, production was in existence in India prior to the war but on a cottage industry basis. Several factories have since installed equipment for the production of wires of brass and copper by mechanical process.

Uses.

27. Copper and yellow metal sheets, circles and strips are consumed in large quantities in India for the manufacture of utensils, stoves, sterilisers, etc. The utensil and hollow-ware-making industry is spread throughout the country the main centres being Bombay, Moradabad in United Provinces, Punjab and Madras. Rods are used in the engineering and electrical industries and are also required by railways, ordnance factories and the building trade. They are used in the manufacture of bolts, nuts rivets, screws, harness and saddlery goods, pipe fittings, door fittings and for arms and ammunition. They are also largely used in ship-building foundries and work-shops. Tubes and pipes are used for internal combustion engines, electrical heaters and other engineering purposes. Wires other than electrical are used in the engineering industry and for commercial purposes such as jari (gold thread borders). Wires are also used for making rivets and screws lead wire is used for electrical fuses and brass and copper wire for wire meshes.

Quality.

28. Brass sheets made by the Indian Copper Corporation are reported to be better than even imported sheets; but the same cannot be said of sheets made by the other rolling mills. For instance, it was complained that some of the sheets supplied by the rolling mills in India were not of uniform thickness and polish and were pitted. The size of the sheets made by the Indian Copper Corporation as also of the imported sheets is 4 feet × 4 feet which is the standard size; whereas the sheets made by the other Indian producers are usually 2 feet wide, the length being variable, the use of which involves higher wastage and is therefore, less economical to the hollow-ware industry.

Arsenical copper rod.

29. Arsenical copper rods are made from copper containing about 0·5 per cent. arsenic. They are generally used for boiler work, i.e., for making water space stays, etc. Before the war there was no manufacture of arsenical copper, rods in India, and for a long time it was considered doubtful if the industry could be established in India. The Jaipur Metal Industries, belonging to the Kamani group, have however successfully produced arsenical copper rods which have met the test of the Railway Board and the Defence Department. There is practically no other manufacturer of arsenical copper rods in the country. The demand for arsenical copper rods is approximately 500 tons a year, whereas the production capacity of the Jaipur Metal Industries for these rods is well over a thousand tons a year. It is stated on behalf of the Jaipur Metal Industries that they could meet the entire Indian demand provided that orders for the supply were placed with them. It was complained that although this production was established in wartime, and rendered useful service in time of emergency, supplies were being arranged from abroad as soon as the war ended and imports became easier. The Board has no reason to disbelieve this. Whatever may have been done in the past, it is desirable that the indigenous capacity is fully utilised before resort is had to imports unless the price difference is so very great as to justify such action.

Demand and supply of semi-manufactures.

30. The demand for copper and brass sheets, circles and strips is estimated at 40 to 50,000 tons per annum, whereas the demand for tubes and pipes is estimated at 1,000 tons per annum. The demand for brass and copper rods, other than black copper rods is 3,000 tons per annum while the demand for copper and brass wires is of the order of 2,000 tons a year. In so far as the production capacity is concerned, the position may be summed up as follows :—

Items.	Annual demand.	Present capacity excluding small producers.	Estimated immediate additional capacity.
	(Tons)	(Tons)	(Tons)
(1) Sheets, circles and strips ..	40-50,000	15,000	30,000 (likely addition after 2 years about 20,000).
(2) Pipes and tubes :—			
(*a*) Lead pipes ..	700	1,000	4,500
(*b*) Copper and brass tubes and pipes.	1,600	100	
(3) Rods ..	3,000	5,000	
(4) Wires ..	2,000	4,000	

Cost of production, cost of importation and measure of protection.

31. (*a*) The cost of production of brass sheets as furnished by Messrs. Kamani Metals & Alloys, Ltd., is as follows :—

	Per cwt. Rs.
Raw materials	60·60
Irrecoverable loss	4·85
Conversion charges	36·55
Interest on working capital	2·11
Distribution expenses	5·09
Average freight	2·00
Premium on prejudice and size discount ..	5·00
Obsolescence	5·05
Managing agent's commission	0·62
Profit on fixed capital	6·32
Total ..	128·19

After discussion with the representatives of the industry, the Board has accepted the following estimate of cost of manufacture of brass sheets :—

	Per cwt. Rs. a. p.	
Cost of raw material	60 10 0	
Cost of conversion, including process losses	35 0 0	
Cost of packing	1 0 0	
Selling expenses	2 8 0	
Profit	6 0 0	
Total ..	105 2 0	
i.e. ..	105 0 0	per cwt.

The Board agreed to allow Rs. 5 per cwt. for obsolescence, premium for prejudice and compensation for size discount. The total fair selling price according to the estimate of the Board would thus come to Rs. 110 per cwt. This is based on a production of 1,600 tons of brass sheets per annum. We examined the cost of production of brass sheets by the Indian Copper Corporation which is the only concern manufacturing sheets on a fairly large scale and on up-to-date lines. Its costs, however, do not offer a common basis for comparison with the rolling charges of the other manufacturers. The Indian Copper Corporation rolls only thick gauges up to 8 SWG. and its rolling cost comes to about Rs. 6 per cwt. In the case of the other rollers, we have calculated the cost of rolling of gauges up to 20 SWG. Besides this, the other factors to be kept in mind in making comparisons of costs are : (1) the Indian Copper Corporation was rolling as much as 10,000 tons per annum, while the smaller manufacturers were rolling only about 1,600 tons per annum, and (2) the Indian Copper Corporation has the advantage of long experience, better technical skill, efficient machinery, and the absorption of a major portion of the overheads by the mining department. Even after making allowance for all these factors, it is plain that the Indian rollers should bring down their costs considerably with the installation of up-to-date plant and machinery. The rolling costs of the Indian Copper Corporation give an indication of the extent to which rolling costs can be reduced. There is no reason why in course of time the other manufacturers should not attain the same level of technical efficiency as the Indian Copper Corporation.

(*b*) *Cost of importation.*—The cost of importation of brass sheets of average 20 SWG 4 ft. × 4 ft. is as follows :—

	Per cwt. Rs. a. p.	
C.i.f. Bombay	84 3 0	
Clearing and landing charges	0 12 0	
Landed cost ex-duty	84 15 0	
Duty at 30 per cent. on c.i.f.	25 4 0	
Landed cost inclusive of duty	110 3 0	
Fair selling price of the Indian manufacturer ..	110 0 0	per cwt.
Retail selling price (current)	121 0 0	

It will thus be seen that the Indian producer is just covered by the existing 30 per cent. *ad valorem* revenue duty. He, however, entertains a genuine apprehension that if the duty is not raised, he will find it difficult to survive foreign competition, particularly in view of the prejudice against the Indian product. We have, of course, made some provision for this prejudice in the calculation of the fair selling price; but this is not regarded as sufficient by the industry. Considering that the industry is comparatively new, that it is working with make-shift equipment the bulk of which will have to be scrapped and replaced by modern machinery, that it has made plans for more scientific and economical rolling and that the allowance for obsolescence is on the conservative side, a small cushion is necessary during the initial period of say 3 years. The Board therefore recommends that the duty be raised from 30 to 35 per cent., that it should be a protective duty, that it should be valid for the period ending 31st March 1950, and that provision should be made for the adjustment of duty so as to maintain the tariff value of imported brass sheets of 4 ft. × 4 ft. average 20 SWG assumed by us in this report. It will be observed that we have effected a drastic cut in the estimate of cost of production furnished by the industry as we feel that in brass, which is the poor man's metal, the price should be kept as low as possible. With the protection now proposed the industry will expand so as to introduce internal competition which will eventually result in lower prices to the benefit for the ordinary consumer. As in the case of brass ingot, so also in the case of brass sheets, we wish to stress that this protection is intended only for the transitional period of 3 years and that the industry should from now take steps to so organise itself as to dispense with the need for protective duties and special forms of assistance at the end of this period. The same duty, i.e., 35 per cent. protective, should apply to copper sheets, although it may be pointed out that there is very little copper rolling in the country.

Zinc sheets ; Lead sheets.

(c) In the preceding paragraph we considered the case of brass sheets. Zinc sheets are covered by item No. 68 in the Tariff Schedule and are subject to a revenue duty of 30 per cent. *ad valorem*. Similarly, lead sheets are governed by item No. 67 for which also there is a 30 per cent. *ad valorem* duty. We have considered whether the duty on these items should remain the same or be raised or reduced. There is no case for increase in duty inasmuch as neither of these products is at present made on any large scale in India. As for reduction, we feel that as these articles are required essentially for other industries, it would be in conformity with the policy generally pursued by Government if the duty is reduced to the lowest possible level. Zinc sheets are required for process blocks and photo-plates, whereas lead sheets are required in the chemical industries. We think that a 20 per cent. duty should be sufficient in respect of both these articles. The duty should be protective in place of revenue and *ad valorem* as at present.

32. Production of brass rods in the country is small and we have not been able to collect data to judge whether the present duty is sufficient or needs modification. We have, however, gathered data on arsenical copper rods, which are being made by the Jaipur Metal Industries, Limited. The estimated cost of production of arsenical copper rods, in India, as accepted by us, is as follows :—

Rods.

	Per cwt. Rs.
Raw materials including losses	73 (77·7)
Cost of conversion including interest and profit ..	53 (89·1)
Total ..	126 (166·8)

Note.—The figures in brackets are the ones given by the producer as their actual cost, but it may be added that they were agreeable to reduce their cost to Rs. 150 per cwt.

The landed cost of arsenical copper rods is reported to be Rs. 95 per cwt. exclusive of duty or Rs. 129·2 per cwt. inclusive of 36 per cent. standard duty and Rs. 117·8 inclusive of the preferential duty of 24 per cent. Comparing the cost of production with the landed cost ex-duty, a duty of 33 per cent. is indicated, but in our opinion a duty of 35 per cent. should be necessary to carry a sense of security and stability to the industry coupled with the assurance that all demands for arsenical copper rods by Government would be placed in the first instance on the Indian producer. The duty should be protective and to remain in force till the end of March 1950. The same duty should apply to brass rods, there being no reason for making any distinction between copper rods and rods of other metals. It may be mentioned here that we have dealt with the case of electrolytic copper rods separately as that is the raw material for the electric wires and cables industry and is little used by other consumers.

33. No demand has been made on behalf of producers of tubes, pipes and sections other than rods, for any modification in the present revenue duty which is 36 per cent. (standard) in the case of tubes and pipes made of copper, and 30 per cent. in the case of those made of brass and lead. A protective duty of 35 per cent. has been proposed by the Board for the semi-manufactures of copper; the same will apply in the case of tubes and pipes made of copper, while the duty on those made of brass and lead will continue to be 30 per cent. but it should be protective in place of revenue. The latter, i.e., brass and lead tubes and pipes are included in item No. 70 (2) proposed by us in the Tariff Schedule, *vide* Appendix No. XVI. The duty on brass wires is 30 per cent., *vide* item 70 in the Tariff Schedule; this duty on brass wires should be raised from 30 per cent. to 35 per cent. so as to bring it into line with the duty on brass rods and it should be made a protective one to remain in force for the period ending the 31st March 1950. The case of the copper wires and cables is considered separately later in this report.

Tubes, pipes and wires.

CHAPTER V—MANUFACTURES OTHER THAN WIRES AND CABLES

List of items dealt with.

34. In this chapter, we deal with manufactured articles, such as, steam and sanitary fittings, building fittings and hollow-ware castings.

Progress of industry.

35. Application for protection of the steam and sanitary fittings industry was made by Messrs. Bombay Brass Works, Jullunder City, who asked for protection of their manufacture of brass and gun-metal and cast-iron water and sanitary fittings. Similar applications were also received from certain other producers such as (1) Gujranwala Metal Works, Gujranwala, Punjab, (2) Annapurna Metal Works, Calcutta, (3) Ashok Manufacturing Company, Lahore, and (4) Govardan Das P. A., Jullunder City. Our questionnaire was issued to these producers as also to certain other producers whose names came to the knowledge of the Board. At the public inquiry, the case of this industry was presented by representatives of the Bombay Brass Works, Jullunder, and the Ashok Manufacturing Company, Lahore. It was said on behalf of the industry that over 3,000 people were employed in the industry, that the industry was developed in war time and that it was now in a position to supply all the Indian demand. The demand is of the order of 3,000 to 4,000 tons of fittings connected with water supply, valued at approximately Rs. 75 lakhs. Of the pre-war manufacturers who were working mostly on a cottage industry scale, mention may be made of two producers, viz., Messrs. Govardhandas P. A. who have a well-equipped factory at Jullunder City, Punjab, and who have been manufacturing steam and water fittings of all specifications since 1907. The products turned out by this industry include general fittings such as taps and cocks and bathroom equipments. The industry also makes articles used in large quantities in workshops for water and steam connections and in boilers for steam mountings. The main consumers of these products are the railways, the public works departments of Government and municipal councils and corporations. The raw materials used by the industry are brass and gun-metal ingots and sheets, scrap of these metals and brass wire netting. Tin and mild steel rods are the other raw materials required by the industry.

Demand, supply and protection.

36. It has not been possible for us to gather data of imports of these fittings as they are not shown separately in the seaborne trade accounts. There is no separate classification for sanitary fittings in the customs schedule with the result that these articles fall under item 70—brass, bronze and similar alloys, rods and manufactures thereof, not otherwise specified, the duty leviable being 30 per cent. *ad valorem*. In ascertaining the cost of production in India, the Board was handicapped because none of the applicant firms filled in the prescribed forms or could give reliable cost data, also because these fittings covered a wide range of articles for which individual cost accounting would have been difficult. Speaking generally, however, the representatives of the industry admitted that their cost of production and fair selling price were below landed costs of the same articles and therefore they were covered for the present. The sense of security should be still greater when the duty on tin is removed as recommended in this report. The only factor which has to be taken into consideration is the prejudice against the Indian product, but the industry is fairly well established so as to enjoy a reputation comparable to foreign imports. As we

have recommended a duty of 35 per cent. on semi-manufactures such as sheets and strips, it would be anomalous to have a lower duty on the manufactured goods. We, therefore, recommend that the duty on manufactured articles such as steam, sanitary and other fittings should be raised from 30 to 35 per cent. so as to bring it into level with the duty on semi-manufactures. It should be a protective duty valid for the period ending March 1950. It is to be hoped that with this added cushion, supplemented by the removal of duty on scrap and reduction in duty on ingot, the local industry will expand so as to meet the growing demands likely to arise out of the increased constructional activities expected to take place in the country in the course of the next three years.

The industry asked for the concession of the removal of import duty on plant and machinery that may be imported for the manufacture of fittings in the country. But this is a general question which will be taken up for the industry as a whole later in the report.

The hollow-ware industry is well established in the country and is not afraid of competition from abroad. No special action is therefore necessary in regard to these articles.

CHAPTER VI—MANUFACTURES—ELECTROLYTIC COPPER RODS, WIRES AND CABLES

History of the industry.

37. In this chapter we deal with the cable industry as a whole. The industry is really divided into two parts, viz., production of black copper rods and manufacture of wires and cables. The manufacture of wires and cables came first in the development of the industry whereas the production of black copper rods was started for the first time in wartime. Before the war, there was only one factory producing wires and cables, viz., the Indian Cable Company at Tatanagar. Since then, another concern has come into existence, viz., the National Insulated Cable Company which has its factory at Calcutta. The production of rods is undertaken by only one firm in Calcutta, viz., the National Rolling Mills, which is really an associate concern of the National Insulated Cable Company. The Indian Cable Company, which was formed in 1920 and which was the only one of its kind in India until the establishment of the National Insulated Cable Company, is a rupee company, registered in India. It applied twice in the past for protection. In its first report, issued in 1928, the Tariff Board had recommended that (1) the duty on electrolytic copper rod known as black rods, be removed and (2) a duty of 5 per cent. should be levied on the thinner rubber-insulated wires and cables which were till then being imported duty-free. The first recommendation was merely a confirmation of the concession which the Company had enjoyed ever since it started making cables in India. In its second report issued in 1931, the Tariff Board rejected the claim of the Indian Cable Company for further protection on the ground that the manufacture of electric wires and cables was not an industry which satisfied the Fiscal Commission's first condition requiring (*a*) the availability of raw materials in the country and (*b*) enjoyment of natural advantages. On the present occasion, the Indian Cable Company did not appear in support of the application of the other factory for protection presumably because the Company is so well established as to be able to carry on its production without fear of competition from abroad. In fact, the representative of the

Indian Cable Company, Mr. Mackintosh, who appeared before the Board to oppose the application of the National Rolling Mills for protection to the local rod rolling industry, did not attend when the Board took up the case of wires and cables, although the Board had asked him to remain present and assist it and had fixed the time of the meeting to suit his convenience. Mr. Mackintosh's conduct was discourteous and objectionable, the more so when it is realised that he represented a concern that had twice in the past solicited the support of the Tariff Board and had benefited thereby. In so far as the production of black rods is concerned, the National Rolling Mills have applied for a protective duty and the application is opposed by the Indian Cable Company which has hitherto been enjoying the concession of the import of copper rods free of duty.

Raw materials.

38. The raw material for the black copper rod industry is electrolytic wire bar (E. W. bar) which is not produced in India and which is unlikely to be produced in India in the near future owing to the unsuitability of Indian copper for the electrolytic process. The chief raw material for the wire and cable industry is the electrolytic copper rod, or black copper rod as it is sometimes called, the other raw materials being rubber and lead for insulation, tin for tinning and cotton and silk for braiding.

Process.

39. The process of rod rolling is simple. Electrolytical copper wire bars are first heated in a furnace to a specified temperature, then taken through passes in the roughing train and finally passed through the finishing train. Through each pass, the sectional area is reduced until in the last pass the required finishing diameter of rod is obtained. Rod emerging from the last set of rolls is coiled by an automatic coiler and is ready for delivery. The manufacture of electric wires and cables falls generally into two parts, viz., the drawing of the wire and the insulation of the cable. The copper rod is first annealed and pickled in a weak solution of sulphuric acid to remove surface oxidation and then passed through a series of wire drawing dies until the final size of wire as required is obtained. Wires that are to be insulated are again annealed and run through a bath of molten tin before being subjected to rubber insulation. The rolling mills as well as both the cable factories are up-to-date units of production and adopt the latest methods of manufacture. The machinery of the National Rolling Mills and the National Insulated Cable Company was obtained with the active assistance of Government, which was helped in this matter by the U.K. Ministry of Supply.

Demand and capacity.

40. (*a*) The demand for electrolytic black copper rods is roughly 10,000 tons, depending upon the demand for wires and cables. For 10,000 tons of black copper rods, 10,400 tons of E. W. bars will be required. Both the Indian Cable and the National Insulated Cable require equal quantities of black copper rods. The capacity of the National Rolling Mills is reported to be 30,000 tons per annum working on three shifts and 10,000 tons per annum working on a single shift. The actual production has been something like 600 to 625 tons per month working single shift owing to paucity of raw materials. During the war, the Indian Cable Company produced annually as much as 10,000 tons of copper wires drawn for all purposes, but in the next three years, production is not expected at the same level, notwithstanding schemes of hydro-electric and other developments. It is expected

to fall to something like 5,000 to 6,000 tons per annum. However, even if the Indian Cable Company required as much as 10,000 tons of copper rods and an equal quantity was required by the National Insulated Cable, the total demand could be met by the National Rolling Mills which have as mentioned above installed capacity of nearly 30,000 tons per annum, going all out. It may therefore be taken that there is complete rod rolling capacity in the country.

(*b*) As for wires and cables, the position regarding demand, capacity and actual maximum production is given in the table below :—

	Name of article.	Demand.	Capacity.	Actual maximum production per annum.
1.	Bare copper wires	10,000 tons	24,000 tons	6,600 tons per annum.
2.	Rubber insulated electric cables (VIR cables).	50 million yards	40 million yards	14 million yards.
3.	Winding wires cotton covered	200 tons	300 tons	250 tons.
4.	Enamelled wires	Not known	Nil	Nil.
5.	Paper insulated cables	Do.	Do.	Do.
6.	Cambric cables	Do.	Do.	Do.

Quality.

41. As regards the quality of black copper rods produced by the National Rolling Mills, there is a difference of opinion between the two consumers, namely, the Indian Cable Company and the National Insulated Cable Company. The Indian Cable Company, which had to use the rods produced by the National Rolling Mills on account of the embargo placed by Government on the import of rods on the establishment of rod production in India, has stated that these rods are (1) slightly harder than is desirable, (2) slightly spilly throughout, thus rendering them unsuitable for the production of tinned copper wires for electric cables, and (3) not sufficiently long for the manufacture of trolley wires weighing about 350 lbs. The National Insulated Cable Company, which is an associate of the National Rolling Mills, and which uses the same rods, has no complaints to make and its representative pointed out that some of these defects were noticed in the earlier productions but subsequently they have disappeared and that rejections on account of these faults have progressively declined. The representative of the National Rolling Mills, the producer of rods, also admitted that some of the rods produced by them were spilly in the beginning, but that, with more experience and improved technique, these defects are being gradually overcome. He has quoted figures showing the fall of rejections from 7 per cent. in the early days to only 1 per cent. latterly. This decrease in the percentage of rejections has not been disputed by the representative of the Indian Cable Company. Furthermore, the National Rolling Mills are now in the process of installing high-powered motors as also a second stand in the roughing train which, when in operation, will increase

the speed of rolling, thereby minimising spills. Secondly, with the installation of new motors, it will be possible for the National Rolling Mills to produce rods suitable for drawing trolley wires of 350 lbs., provided of course the mills get electrolytic wire bars of proportionate weight. The Board is satisfied that the quality of the rods produced by the National Rolling Mills has improved steadily and that in any case, there should be no ground for complaint against indigenous rods in future. In so far as wires, cables and conductors are concerned, no complaint was received from any of the consumers against Indian products and, on the other hand, evidence has been adduced by the producers to show that satisfaction has been expressed by numerous consumers on various occasions. It may, therefore, be presumed that the quality of these articles is also satisfactory.

Cost of production, landed cost, and measure of protection.

42. (1) The accounts of the National Rolling Mills were examined by our Cost Accounts Officer at great length and a table of cost of production has been prepared giving what it should be under optimum conditions. This statement as finally accepted by the Board, is given in Appendix XV. It will be seen from the statement that the fair selling price made up of the cost of production and legitimate profit of the producer comes to Rs. 1,469 per ton of black copper rod, based on a production of 10,000 tons per annum.

(2) Information regarding the landed cost of imported black copper rods coming from the U.K. and Canada is not directly available, there being no recent imports. We have, however, built up the landed cost of U.K. black copper rod by taking the estimated landed cost of electrolytic wire bars, and adding thereto the estimated cost of conversion based on the difference in the latest prices of electrolytic wire bars and black copper rods in the U.K. Though electrolytic wire bars are not being exported from the U.K., we have been told that the latest quotation would work out at Rs. 1,181 per ton landed Indian port. To this should be added Rs. 67 per ton being the estimated conversion cost of the bar into rods. The estimated landed cost of U.K. black copper rods would thus work out to Rs. 1,248 per ton exclusive of duty. As the import of rods from U.K. is cheaper than imports from Canada, the landed cost of electrolytic wire bars imported from Canada alone being Rs. 1,332 per ton, we have adopted the estimated landed cost of the U.K. rods for assessing the measure of protection required for the Indian industry.

(3) The fair selling price of indigenous black copper rods (as given in Appendix XV) is Rs. 1,469 per ton based on the price of Canadian electrolytic wire bars, which alone are available to the Indian industry. The difference between the fair selling price and the estimated landed cost ex-duty comes to Rs. 221 (Rs. 1,469—Rs. 1,248). The difference would be bridged by a duty of 17·7 per cent. on c.i.f. Calcutta and indicate the measure of protection required for the safeguarding of the Indian industry. We, however, recommend a protective duty of 20 per cent., to remain in force till the end of March 1950, for the following reasons. Firstly, we have assumed a production of 10,000 tons whereas the rolling mills have not yet exceeded 6,000 tons per year and it is not certain whether the full, single shift capacity of 10,000 tons will be reached owing to the difficulty of procuring the requisite amount of electrolytic wire bars. Secondly, the new motors are yet to be installed and their efficiency and effect on cost of production yet to be proved. Thirdly, there is reason to apprehend that if the price difference

between the imported and the Indian rods were to be unduly narrow, the Indian Cable Company may rather use imported rods than indigenous rods. Lastly, supply of electrolytic wire bars is controlled by the group of industries abroad which would rather export rods than electrolytic wire bars. All these considerations demand that the protection should be effective, with a small margin in favour of the Indian producer. We, therefore, think that a protective duty of 20 per cent. to remain in force till the end of March 1950 is necessary to safeguard the Indian rod rolling industry, and recommend that action be taken to impose the duty accordingly. Simultaneously with the imposition of duty, the present embargo on import of black copper rods should be lifted, so that the production of wires and cables may not suffer and the quality of production of the National Rolling Mills may be kept at the highest possible level. When this duty is imposed, the concession given to the cable manufacturers to import black copper rods free of duty must disappear. In this connection it may be pointed out that when the Tariff Board in 1928 recommended removal of duty on black copper rods, it envisaged reimposition of duty on the rod industry being established in India. There should be a separate item in the Tariff Schedule for black copper rods which generally come in the form of coils. This is necessary to avoid import of ordinary copper rods in the name of black copper rods which will be subject to a lower (20 per cent.) rate of duty.

(4) This paragraph deals with hard drawn bare copper wires or conductors, and stranded wires. At present the duty on these goods is governed by item No. 72 (*e*) of the Customs Tariff Schedule which, as it stands, covers (*a*) bare copper wires, (*b*) paper insulated cables, and (*c*) A.C.S.R. (aluminium conductors steel re-inforced). The duty is 10 per cent. *ad valorem* revenue. This item will have to be split up in view of the fact that, while there is adequate capacity in the country for bare copper wires, there is no capacity for paper insulated cables which would still have to be imported and on which therefore a lower duty would be reasonable. Bare copper wires are also included in item 73 (1) which will have to be recast when the commodity is put in under a separate item, namely, 72 (*f*), which will be only for bare hard drawn or annealed electrolytic copper wires and cables of all sizes designed as parts of a transmission system. The duty on bare hard drawn or annealed electrolytic copper wires will have to be raised from the present figure of 10 per cent. to a higher figure in view of two facts, namely, (1) there is more capacity for them than there is demand in the country, and (2) a duty of 20 per cent. will be imposed on black copper rods if our recommendation in this behalf is accepted by Government. If the duty is not raised, the danger would be that black copper rods might be imported under the title of wires, thus escaping a part of the duty and secondly, the cable companies may import rods in the name or form of wires and either sell the same or make smaller conductors thus not using the rods made by the National Rolling Mills in India. The duty to be imposed on these wires should be the 20 per cent. duty proposed to be levied on copper rods plus the 10 per cent. duty that was given as a preference in favour of the Indian producer in the existing Tariff Schedule, that is, a total of 30 per cent. For the present, the third type of wire included in item No. 72 (*e*) namely, A.C.S.R., will go with the bare hard drawn or annealed electrolytic copper wires and cables of all sizes, for which a separate item 72 (*f*) has now been proposed. To remove ambiguity, the reference to bare copper wires occurring in item No. 73 (1) should be removed, so that bare copper wires will be governed by only one item, namely, 72 (*f*). The revised item No. 73 (1) will then read as follows and be subject to the existing duty.

"Electrical Control Gear and Transmission Gear, namely, switches (excluding switch boards fuses and current breaking devices of all sorts and descriptions, designed for use in circuits of less than ten amperes and at a pressure not exceeding 250 volts, and regulators for use with motors designed to consume less than 187 watts, insulated copper wires and cables, any one core of which, not being one specially designed as a pilot core, has a sectional area of less than one eightieth part of a square inch, and wires and cables of other metals of not more than equivalent conductivity : line insulators, including also cleats, connectors, leading-in-tubes and the like, of types and sizes such as are ordinarily used in connection with the transmission of power for other than industrial purposes, and the fittings thereof but excluding electrical earthen-ware and porcelain otherwise specified."

(5) Production of rubber insulated cables is still in its initial stage in the National Insulated Cable Company, which therefore, withdrew the demand for a revision of the tariff on such cables. These cables are governed for purposes of tariff by item No. 73 (6), according to which there is an *ad valorem* revenue duty of 7½ per cent. The tariff may remain at 7½ per cent. revenue as at present. The wording of the item also requires no modification. It is possible that the Company may come up for revision a little later when more experience has been gained and data are available as to the cost of production and competitive capacity.

CHAPTER VII—GENERAL

Eligibility for protection.

"43. In the previous chapters, we have recommended imposition of protective duties for the safeguarding of the following industries :—

(1) brass ingot ;

(2) yellow metal alloys ;

(3) white metal alloys ;

(4) brass sheets, circles, and rods ;

(5) arsenical copper rods ; and

(6) electrolytic copper rods and wires.

We have also recommended removal of duty on nickel, tin and other metals like cobalt, chromium, tungsten and magnesium, as also on scraps of these metals. We have recommended that the removal of duty on copper unwrought, copper scrap, brass scrap, lead ingot, lead scrap, zinc ingot and zinc scrap should be confirmed. We have also suggested a few alterations in certain revenue duties, e.g., bare electric copper wires (the duty to be raised from 10 per cent. to 30 per cent. to be protective), certain non-ferrous manufactures (duty to go up from 30 to 35 per cent.), and zinc and lead sheets (duty to be reduced from 30 per cent. to 20 per cent.). We have satisfied ourselves that the non-ferrous metals industry in India, such as it is, is eligible for these concessions and privileges. The industry, though comparatively new, has established itself on a firm footing, taking advantage of the wartime conditions, and only requires help during the transition period to consolidate the progress achieved so far and to be established so as to face the future with confidence. We have explained, while dealing with specific matters,

e.g., black copper rods and electrical cables and wires, that the machinery installed is modern and up-to-date and that the promoters of the industry have taken every care to see that production is carried on efficiently and economically. While dealing with brass ingots and brass rolling industry, we explained that the industry had to carry on with improvised machinery but that plans had already been made and indeed were well in an advanced stage for replacement of existing machinery by more up-to-date and efficient plant which when installed would enable costs to be reduced thereby increasing the competitive capacity of the Indian industry. On the whole, therefore, we have no hesitation in saying that the industry is run on sound business lines there by satisfying the first of the two conditions prescribed by Government for eligibility for protection. In so far as raw materials, markets and natural advantages are concerned, the industry is in a better position than similar industries developed in other countries. If copper rod rolling and wires and cable industry could be established in England which has to import all its copper requirements, there is no reason why the absence of copper in India in sufficient quantities should be regarded as a disqualification for these industries. From the point of view of market, national interests and importance of the industry, the industries referred to in this report deserve protection as was amply demonstrated by the experience of the war just concluded. As for the development so as to be able to carry on successfully without protection or State assistance, we have shown that the industry is already on the verge of being self-supporting and that, after a period of three years, it should be able to dispense with most of the protection now proposed. Both the conditions prescribed have, therefore, been fulfilled and there is full justification for the proposals for protection and assistance embodied in this report.

Duration of protection.

44. Wherever we have recommended protection, it is for the period ending March 1950. By the terms of our reference, we are precluded from recommending protection for a period exceeding three years, but we have suggested the end of March 1950 for purposes of administrative convenience, intending that the period of protection should coincide with the financial year.

Nature of duty.

45. We have recommended conversion of revenue into protective duty in most cases, as the non-ferrous metals industry has to be treated as a whole and it would be unwise to have most duties protective and a few duties revenue. Revenue duties are more liable to fluctuations which might have the effect of up-setting the balance between the different stages of production which are closely interlinked.

Burden of protection.

46. Increases in duties proposed by us have not been numerous or substantial. We have not mentioned in the report details regarding the burden of incidence in each case, but this should not imply that any recommendation has been made without adequate examination of this aspect. In the case of brass sheets for instance, in which the common man is most interested, sheets being the raw material for the utensil-making industry, increase in duty from 30 per cent. to 35 per cent. will raise the price of brass utensils by less than one anna per lb. Assuming that an ordinary family purchases brass utensils of the weight of 8 lbs. per year, which is really a liberal estimate, the burden of extra duty will work out less than 8 annas per year per family. This burden will have to be borne only for

a period of three years after which the extra duty should disappear and the burden should not be above the original limit. It should decline progressively consequent on the development of the industry on a firm basis. Taking again the case of electric wires and cables, we find that in a town electrification scheme costing Rs. 10 lakhs, the cost of bare copper wires and cables would be approximately Rs. 1 lakh. The duty on this material will be raised from 10 per cent. to 30 per cent. involving an extra cost of Rs. 20,000. Spread over the total cost of electrification, i.e., Rs. 10 lakhs, the extra burden amounts to 2 per cent. Even so, it may be regarded as somewhat high, but then one has to take into account the fact that if there is no local industry, there will be no competition and there will be no guarantee that imports will be made at minimum prices and not at prices that will be dictated by the foreign producer or by the importer. On the other hand, mention may also be made of the proposed reduction of duty on brass ingot from 30 per cent. to 15 per cent., the benefit of which will go mainly to cottage industries and users of hand-made utensils, castings and sanitary fittings.

Removal of import restrictions.

47. When effect is given to our recommendations for protection and assistance to the non-ferrous metals industry, it will not be necessary to continue any longer existing restrictions on import of non-ferrous metals, ores, scrap, semi-manufactures and manufactures. These restrictions should therefore be removed. So long as the indigenous industry is assured of protection against unfair competition by means of an adequate tariff, inflow of imports is not only in the interests of the country as a whole but even of the industry itself. The country is deficient in metals and should welcome import of non-ferrous goods in any shape or form. Import of semi-manufactures and manufactures of good quality will keep the local industry up to standard as with price equalisation, quality will be the determining factor in the competition between Indian and imported products.

Ban on export of scraps and removal of duty on scrap.

48. India is deficient in non-ferrous metals and has to import the bulk of her requirements. For a considerable time, India will have to import large quantities of copper, brass, lead, tin, zinc and nickel, to mention the more important non-ferrous metals. That being the position, every action should be taken, firstly to conserve scrap, and secondly to attract scrap from abroad. For conservation of scrap, there should be a ban on export of scrap of all non-ferrous metals and alloys. Similarly, duty on scrap of all non-ferrous metals and alloys should be removed so that import of scrap may be easier and cheaper providing raw material to the Indian smelting and secondary metal industry.

Refund of duty on machinery imported for development of non-ferrous metals industry.

49. A number of persons who appeared at the inquiry requested that duty on import of machinery ordered, or which may be ordered, for the expansion and development of the non-ferrous metals industry in the country should be removed. We have referred in the body of our report to the plans made by several concerns for installing new capital machinery, especially for the manufacture of lead ingots, and production of sheets and circles. A number of concerns are importing rolling mills and extrusion plants from abroad. One concern, namely, the Indian Standard Metal Co., Bombay, had imported a dry rectifier plant from the U. S. A., and paid a duty of 36 per cent. under protest.

As these mills and machinery cannot be manufactured in the country, and as they have to be purchased from abroad at the present inflated costs, it is desirable that the initial capital expenditure should be reduced to the minimum, and overcapitalisation with all the consequential legacy of high costs of production avoided. The desired relief could be extended by giving a refund of duty on machinery which is at present 10 per cent. The refund should be given on all machinery imported for the expansion and reorganisation of the non-ferrous metals industry since the case of the industry was referred to the Board, that is the 3rd of November 1945. Similar recommendations have been made in the other cases which have come before the Board.

Government to take an active hand in prospecting and proving of ores.

50. Considering the deficiency of India in the non-ferrous metals, a more vigorous policy on the part of the Central Government in the matter of prospecting and proving of ore reserves is called for. Apparently, the Geological Survey of India has so far confined its activities to the mapping of areas and possible location of minerals, but there has been no detailed prospecting, much less proving of the ores. During our inquiry, representatives of the industry laid great stress on the desirability of Government giving active assistance in the proving of ores capable of commercial exploitation and we feel that this request is reasonable and should be most sympathetically considered by Government. We would particularly refer to the case of copper, lead, zinc and tin. There should also be some laboratory where ores could be analysed to enable results to be published for the information of prospective industrialists. The Central Government will shortly be setting up a Metallurgical Institute at Jamshedpur and it would be desirable to have a full-fledged non-ferrous section in the Institute with facilities for pilot plants where concentration of ores and extraction of metals from ores or concentrates may be experimented upon and results obtained suitable for commercial use. While the industry should have its own laboratories for investigating the *ad hoc* problems, Government laboratories should afford facilities for long-range researches common to the industry as a whole.

Provision for trained technical personnel.

51. As the non-ferrous metals industry has started in India only recently, it lacks in suitable technical personnel with experience of modern metallurgical plants and appliances. Government should, therefore, arrange for the training of technically qualified persons for the industry abroad to ensure a speedy and healthy growth of the industry. We would also impress upon the industry the need to employ an adequate number of qualified technicians and to have at least one technically qualified Director on the Board of Management.

Government to build up stock piles of essential metals or ores.

52. Another action which Government ought to take in view of our deficient supply of essential non-ferrous metals is either to purchase metals or suitable ores in the world market and build up a stock pile in the country, as also to assist private industrialists in making purchases at concession prices based on bulk orders negotiated by or through Government. There is reason to believe that other countries, particularly the U. S. A. and the U. K., are following this policy and building up piles of essential metals from which releases are made to industries as and when occasion arises.

We feel that, if similar action is taken in this country, not only will the stock position improve, but our industries will be assured of steady supplies thereby enabling them to reduce their costs of production and to face world competition with greater confidence and with less dependence upon protective duties, the benefit of which will pass ultimately to the consumer. This is primarily a planning matter, but we have referred to it as it has also a bearing on the cost of production and the need for and duration of protection.

Disposals.

53. It was urged by the representatives of the non-ferrous metals industry at the inquiry that the disposal of non-ferrous metals by the Disposals Directorate of the Department of Industries and Supplies left something to be desired. Trade did not know what quantities were available for disposal and the prices sought to be obtained were in many cases unremunerative. A distinction was drawn between the practice followed in India and the policy pursued in other countries, especially U.K. where non-ferrous scrap was made available to consuming industries at controlled rates and not at exorbitant prices likely to be obtained when goods are put to auction in a scarcity market. We suggest that the practice followed in this regard in the other countries may be ascertained and that in any case representatives of the non-ferrous industry, including the cottage industry, should be taken into confidence in the disposal of non-ferrous metals scrap with a view primarily to make the best possible use of the scrap in the interests of the non-ferrous industry in the country. It was further suggested in this connection that the Officer in charge of development of non-ferrous metals in the Department should be associated with the disposal of non-ferrous scrap ; the suggestion appears to us to be sound and is commended for consideration.

Incursion of foreign interests.

54. Another point which was mentioned at the public inquiry and to which we are inclined to make a reference in this report is that, with the removal of duty on primary metals, there may be a tendency on the part of foreign capitalists to set up plants for the production of alloys and other non-ferrous articles in India. This again is essentially a matter for planning, but we draw the attention of Government to this matter in order that a watchful eye may be kept with a view to checking any such tendency.

Comparison of duties in India and Australia.

55. It may perhaps be of interest to draw a comparison between the tariffs prevailing in a country such as Australia, which, like India, is still engaged in building up its industries and which has to protect itself from imports from the industrially advanced countries like the United Kingdom and the United States of America. The statement giving the comparison will be found in Appendix XVII. It will be observed that the duty in Australia on brass sheets, circles and strips is 50 per cent. against our existing duty of 30 per cent. and proposed duty of 35 per cent. ; the duty on rods is 50 per cent. as against our existing duty of 30 per cent. and the proposed duty of 35 per cent. The duty on electric wires and cables in Australia is 45 per cent. as against our existing duty of 10 per cent. and the proposed duty of 30 per cent. Conditions of course are not altogether comparable in the two countries. For instance, brass is much more a poor man's article in this country than it is in Australia, but even so, the disparities in duties indicate that the duties proposed by us are not over-protective or more discriminatory against imports.

CHAPTER VIII—SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Primary or virgin metals :

56. Our recommendations and conclusions are summarised as under :—

(i) Copper.

(1) India will have to depend upon imports of copper, electrolytic as well as fire-refined, of the order of 58,000 tons per year. (Paragraph 9.)

(2) Steps should be taken by the Indian Copper Corporation to convert itself from a sterling company into a rupee company and to see that Indian investors have a predominant voice in the constitution of the Board of Directors. The Corporation should be given an assurance that, if the c.i.f. prices of copper at an Indian port falls below the then cost of production of copper by the firm at Ghatsila, the Corporation, subject to the change suggested above, will be entitled to ask for reconsideration of the case for protection or assistance. Removal of duty on copper unwrought and copper scrap should be confirmed. (Paragraph 10.)

(ii) Lead.

(3) There is a gap of 9,000 to 12,000 tons between the estimated requirements of India in regard to lead and the home production, which will have to be bridged by imports from abroad. (Paragraph 11.)

(4) The present position according to which there is no duty on lead ingot and lead scrap is satisfactory and should be continued. (Paragraph 11.)

(5) As home production of lead should be stepped up, Government should make a formal declaration that the case of the lead industry for assistance will be considered sympathetically during the next three years, provided that (*a*) the production of lead is carried on on scientific and sound business lines and (*b*) the cost of home production proves unremunerative as compared with the cost of importation of lead, at the time of the examination of this question. (Paragraph 11.)

(6) Facilities should be given to the Metal Corporation of India, Ltd., for importing certain machinery from the U. S. A. in preference to the U.K., as the U. S. A. deliveries were much quicker. (Paragraph 11.)

(iii) Zinc.

(7) There being no production of zinc in India and zinc being a raw material for a number of industries, the present position according to which there is no duty on zinc should be continued. There should be no duty on zinc scrap, as well as on zinc ingots, slabs, blocks, or bars. (Paragraph 12.)

(iv) Tin.

(8) The pre-war average Indian requirements of tin were 2,500 tons per year; and the estimated post-war consumption is 6,000 tons. (Paragraph 13.)

(9) The duty on tin and tin scrap should be removed. (Paragraph 13.)

(10) The present position according to which India gets her quota of tin from the International Tin Control Board through the U.K. Ministry of Supply is not satisfactory, and India should have direct access to the International Tin Control Board for getting its full share of tin. Every attempt should be made to have the present Indian quota of 2,000 tons raised to a figure approaching 6,000 tons which can be easily absorbed by the Indian alloy industry. (Paragraph 13.)

(11) Considering the shortage of tin, the local de-tinning industry (started in Bombay) will be assisted if (*a*) the duty on tinplate scrap is removed and (*b*) export of tinplate scrap from India is prohibited. (Paragraph 13.)

(v) Nickel.

(12) India has to depend upon import of nickel to meet her estimated annual requirements of 2,000 tons, the bulk of which is used for coinage. The duty on nickel and nickel scrap should be removed. The duty on nickel alloys should remain at the present level, i.e., 30 per cent. *ad valorem* but made protective. (Paragraph 14.)

(vi) Other Non-ferrous metals.

(13) So long as there is no production in India of other non-ferrous metals such as cobalt, chromium, tungsten, and magnesium, the existing duty of 30 per cent. *ad valorem* on all these metals should be removed as (i) they are raw materials for other industries, (ii) they do not yield substantial revenue, and (iii) Indian producers of alloys of these metals should be placed on a competitive basis with foreign producers. (Paragraph 15.)

Secondary metals ; alloys ; and refining of scrap :

(i) Brass ingot.

(14) The Indian requirement of the yellow metal is estimated at 96,500 tons per annum, against the Indian productive capacity of about 1,00,000 tons per annum which, with the installation of electric furnaces, is likely to increase to 1,30,000 tons in the near future. (Paragraph 17.)

(15) The refining industry is an essential stage in the development of the non-ferrous metals industry in the country and must, therefore, be assisted to survive in the transition period by the imposition of as low a protective duty as possible, it being clearly understood that the industry should be so organised in the meantime that it should be able to stand on its own legs at the end of the protection period, i.e., without any protective duty. [Paragraph 18 (4).]

(16) A protective duty of 15 per cent. should be levied to safeguard the Indian brass ingot industry. [Paragraph 18 (8).]

(17) In order to avoid importation of alloys, other than brass ingots, which may be subject to a higher customs duty, brass ingot should be defined so as, on analysis, to contain (*a*) copper 74 to 55 per cent., (*b*) zinc 26 to 42 per cent., and (*c*) components other than copper and zinc, including impurities, not to exceed 3 per cent. of which not more than one-half should be tin. [Paragraph 18 (8).]

(ii) Yellow metal alloys.

(18) The Indian requirements of yellow metal alloys other than brass (i.e. gun-metal, bronze, bell-metal and phosphor bronze) come to approximately 15,000 tons per year, for which there is ample productive capacity in the country. (Paragraph 19.)

(19) In place of the existing revenue duty of 30 per cent. on these metals, there should be a protective duty of 40 per cent., until the end of March 1950. (Paragraph 19.)

(iii) White metal alloys. (20) The total white metal production capacity in the country is 40,000 tons, the demand being roughly 15,000 tons per annum. (Paragraph 20.)

(21) The demand for tin solder in the country is 3,000 to 4,000 tons per year. Having regard to the comparatively small requirements of tin and the fact that the incidence of solder and other white metal alloys on the cost of the job in which they are used is small, the Indian industry should be protected by an adequate duty instead of by a subsidy ; and in place of the existing duty of 30 per cent., there should be a protective duty on tin solder of 50 per cent. (Paragraph 20.)

(iv) Other white metals. (22) As in the case of tin solder, the duty, which should be protective, on other white metals should be 50 per cent., on the clear assumption that the duty on tin will be completely removed. (Paragraph 21.)

(v) Type metals. (23) Type metal should be treated as a separate item in the Tariff Schedule. (Paragraph 22.)

(24) Subject to action on the recommendations in our report on antimony, and provided the duty on tin is removed as recommended in this report, the existing duty of 30 per cent. on type metal may remain without risk to the indigenous type metal industry. It should be made protective, in force until end of March 1950. (Paragraph 22.)

(vi) Mazak. (25) The total demand of 1,000 tons per year of mazak for die-casting will have to be met from imports. So long as it is not produced in India, and zinc is free of duty, the duty on mazak containing 96 per cent. zinc should be removed, with a view to developing the die-casting industry in India. (Paragraph 23.)

(vii) Remaining alloys. (26) Other alloys, i.e., nickel silver, cupro-nickel, nickel alloys, etc., should continue to be subject to the 30 per cent. *ad valorem* protective duty. (Paragraph 24.)

Manufactures. (27) The production of sheets and circles developed mostly during the war, except in the case of the Indian Copper Corporation which started rolling in 1928. In so far as tubes and pipes are concerned, there was practically no production in India before the war. The same was the case with arsenical copper rod. The demand for arsenical copper rod is approximately 500 tons a year ; and the productive capacity of the only factory (the Jaipur Metal Industries Ltd., for arsenical copper rods is over a thousand tons a year. The indigenous capacity should be fully utilised. (Paragraphs 26 and 29.)

(i) Brass sheets. (28) The existing revenue duty of 30 per cent. should be converted into a 35 per cent. protective duty and remain in force until the end of March 1950. Provision should be made for the adjustment of duty so as to maintain the tariff value of imported brass sheets of 4 ft. × 4 ft. average 20 SWG at the figure assumed in the report. [Paragraph 31 (*b*).] As in the case of brass ingot, so also in the case of brass sheets, the protection is for the transitional period. [Paragraph 31 (*b*).]

(29) The same duty, i.e., 35 per cent. should apply to copper sheets, although there is very little copper rolling in the country, and that it should be a protective duty. [Paragraph 31 (*b*).]

(ii) Copper sheets.

(30) The existing duty of 30 per cent. *ad valorem* on both these items should be reduced to 20 per cent. The duty should be protective and *ad valorem*. [Paragraph 31 (*c*).]

(iii) Zinc and lead sheets.

(31) A protective duty of 35 per cent. on both these items will be sufficient to protect the Indian industry. Also, all demands for arsenical copper rods by Government should be placed in the first instance on the Indian producers. (Paragraph 32.)

(iv) Arsenical copper rods and brass rods.

(32) (*a*) The existing duty of 30 per cent. *ad valorem* on tubes and pipes and sections of brass and lead should continue, but it should be made protective in place of revenue. Duty on pipes and tubes made of copper should be 35 per cent. protective in place of the present 36 per cent. standard *ad valorem* and 24 per cent. preferential revenue. (Paragraph 33.)

(v) Tubes, pipes and wires.

(*b*) The duty on brass wires should be raised from 30 to 35 per cent, it being a protective duty (Paragraph 33.)

(33) The duty on manufactured articles, such as steam and sanitary fittings, should be raised from 30 per cent. to 35 per cent. so as to bring it into level with the duty on semi-manufactures such as sheets and strips. The duty is to become protective. (Paragraph 36.)

Manufactures other than wires and cables.

(34) The hollow-ware industry is well established in the country, and no special assistance is necessary for it. (Paragraph 36.)

(35) The demand for electrolytic black copper rods, is roughly 10,000 tons, depending upon the demand for wires and cables. There is rod rolling capacity in the country to the extent of 30,000 tons working three shifts. [Paragraph 40 (*a*).]

Manufactures electrolytic copper rods and cables and wires.

(36) Similarly, there is enough capacity to meet the Indian requirements of wires and cables, except rubber-insulated cables, paper-insulated cables and certain special types of cables. [Paragraph 40 (*b*).]

(37) The quality of electrolytic copper rods, wires, cables and conductors produced in India is satisfactory. (Paragraph 41.)

(38) A protective duty of 20 per cent. should be levied on imports of electrolytic copper rods. [Paragraph 42 (3)].

(39) Simultaneously with the imposition of duty, the present embargo on import of black copper rods should be lifted, so that the production of wires and cables may not be affected and the quality of indigenous production may be kept up to the mark. [Paragraph 42 (3).]

(40) When this duty is imposed, the concession given to the cable manufacturers to import black copper rods free of duty should be withdrawn [Paragraph 42 (3).]

(41) There should be a separate item in the Tariff Schedule for electrolytic copper rods with a protective duty of 20 per cent.; all the other copper rods will be subject to a protective duty of 35 per cent. [Paragraph 42 (3).]

(42) Item No. 72 (*e*) of the Customs Tariff Schedule which as it stands covers (*a*) bare copper wires, (*b*) paper insulated cables, and (*c*) A.C.S.R. (Aluminium conductors steel reinforced)—all of which are subject to 10 per cent. *ad valorem* revenue duty—needs splitting up because, while there is adequate capacity in the country for bare copper wires, there is no capacity for paper insulated cables which would still have to be imported and on which therefore a lower duty would be reasonable. Item No. 73 (1) of the Tariff Schedule, which also includes bare copper wires, needs recasting when the commodity is put in under a separate item, viz., 72 (*f*) which will be only for bare hard drawn or annealed electrolytic copper wires and cables of all sizes designed as parts of a transmission system. [Paragraph 42 (4).]

(43) The duty on bare hard drawn or annealed electrolytic copper wires should be raised from the present figure of 10 per cent. to a higher figure because there is more capacity for them than there is demand in the country and because a duty of 20 per cent. will be imposed on black copper rod if the recommendation in this behalf is accepted. The duty to be imposed on wires should be the 30 per cent. protective. [Paragraph 42 (4).]

(44) The third type of wire included in item No. 72 (*e*), viz., A.C.S.R. will go with the bare hard drawn or annealed electrolytic copper wires and cables of all sizes, for which a separate item 72 (*f*) has been proposed. [Paragraph 42 (4).]

(45) The reference to bare copper wires occurring in item No. 73 (1) should be removed, so that bare copper wires will be governed by only one item, viz., 72 (*f*). [Paragraph 42 (4).]

(46) The existing *ad valorem* revenue duty of 7½ per cent. on rubber insulated cables [*vide* item No. 73 (6) of the Tariff Schedule] may remain unchanged, as also the wording of the item. [Paragraph 42 (6).]

General.

(47) The non-ferrous metals industry in India is generally run on sound business lines, thereby satisfying the first of the two conditions prescribed by Government for eligibility for protection. As compared with other manufacturing countries, it also satisfies the second condition, namely, the availability of raw materials, markets, natural advantages, and national interests. (Paragraph 43.)

(48) When effect is given to the recommendations for protection and assistance, the existing restrictions on import of non-ferrous metals, ores, scrap, semi-manufactures and manufactures should no longer be necessary and should be removed. (Paragraph 47.)

(49) As India will remain deficient in respect of copper, brass, lead, tin, zinc and nickel (to mention only the more important non-ferrous metals) for a considerable time to come, every attempt should be made (1) to conserve scrap by placing an embargo on export of scrap of all non-ferrous metals and alloys, and (2) to attract scrap from abroad by removing the duty on scrap of all non-ferrous metals and alloys. (Paragraph 48.)

(50) For the expansion and development of the non-ferrous metals industry in the country, a refund of duty should be given on machinery, (which is at present 10 per cent.). The refund should be given on all plant and machinery imported since the case of the non-ferrous metals industry was referred to the Board (i.e. the 3rd November 1945). (Paragraph 49.)

(51) Considering the deficiency of India in non-ferrous metals, a more vigorous policy on the part of the Central Government in regard to prospecting and proving of mines is called for. In the Metallurgical Institute proposed to be established by the Central Government at Jamshedpur, there should be a full-fledged non-ferrous section with facilities for pilot plants where concentration of ores and extraction of metals from ores or concentrates may be tried for results of commercial value. (Paragraph 50.)

(52) Government should arrange for the training of technically qualified persons for the non-ferrous metals industry in industrially advanced countries. The industry should employ suitable technical personnel and appoint a qualified technical director. (Paragraph 51.)

(53) Government should purchase metals or suitable ores in the world market and build up a reserve in the country and assist private industrialists in purchasing at concession prices associated with bulk orders and Government's good offices, as is being done in other countries (e.g., the U. S. A. and the U. K.). (Paragraph 52.)

(54) In regard to the disposal of non-ferrous metals by the Disposals Directorate of the Department of Industries and Supplies, Government should take into confidence the representatives of the non-ferrous industry, including cottage industry, with a view primarily to making the best possible use of the scrap in the interest of the industry. For this purpose, the Officer in charge of Development of Non-ferrous Metals in the Department might be associated with the disposal of the non-ferrous scrap. (Paragraph 53.)

(55) A watch should be kept on the effect of the removal of duty on primary metals lest foreign capitalists might set up plants for the production of alloys and other non-ferrous articles in India. (Paragraph 54.)

Acknowledgments.

57. We wish to place on record our thanks to Mr. R. N. Kapur, Technical Adviser for non-ferrous metals, for having prepared the case with considerable care and attention; to Mr. Raghava Rao, our Cost Accounts Officer, who carried out cost accounting of a number of firms under great pressure and in difficult conditions caused by incomplete accounts; to Dr. D. P. Antia of the Department of Industries and Supplies, for the valuable help given from time to time; to V. P. Sondhi of the Geological Survey of India and Mr. G. C. Mitter of the Mint, Bombay, for having helped us at the public inquiry; to the representatives of the Non-ferrous Metals Manufacturers' Association and the industry generally for having put the case fairly and squarely before the Board so as to facilitate our deliberations and conclusion; and to Varma, our Assistant Secretary, for general supervision over the work connected with the case.

SHANMUKHAM CHETTY—President.
C. C. DESAI—Member-Secretary.
NAZIR AHMAD—Member.
H. L. DEY—Member.

RAMA VARMA—Assistant Secretary.

Srinagar, the 6th October, 1946.

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APPENDIX I.

DEPARTMENT OF COMMERCE

RESOLUTION

TARIFFS

New Delhi, the 3rd November 1945.

No. 218-T (55)/45.—In the statement on industrial policy issued by the Government of India on the 23rd April 1945, it was announced that, pending the formulation of a tariff policy appropriate to the post-war needs and conditions of the country and the establishment of permanent machinery for the purpose, Government would set up machinery for investigating claims from industries, which have been started or developed in war-time and which are established on sound lines, to assistance or protection during the transition period. A press communique issued on the same date invited industries to address their claims to the Secretary to the Government of India in the Department of Commerce.

2. Several industries have accordingly applied for assistance or protection, and on a preliminary examination of their claims, the Government of India have come to the conclusion that applications submitted by the following industries call for a detailed examination :—

(i) non-ferrous metals, including antimony ;

(ii) grinding wheels ;

(iii) caustic soda and bleaching powder ;

(iv) sodium thiosulphate, sodium sulphite anhydrous, sodium bisulphite ;

(v) phosphates and phosphoric acid ;

(vi) butter colour, aerated water powder colour ;

(vii) rubber manufactures ;

(viii) fire hose ;

(ix) wood screws ;

(x) steel hoops for baling.

Other applications are under the consideration of Government and further action in their case will be taken in due course.

3. In addition to the industries which have applied for assistance or protection, there are certain industries the starting of which was considered essential by the Government of India under conditions created by the war. Early in 1940, Government announced that specified industries promoted with their direct encouragement during war-time might feel assured that, if they were conducted on sound business lines, they would, by such measures as Government might devise, be protected against unfair competition from outside India. In accordance with

this decision, the following industries have been given an assurance of protection against unfair competition after the war :—

(i) bichromates ;

(ii) steel pipes and tubes up to a nominal bore of 4 inches ;

(iii) aluminium ;

(iv) calcium chloride ;

(v) calcium carbide ;

(vi) starch.

Of these industries, only those engaged in the manufacture of bichromates, calcium chloride and starch have so far applied for assistance or protection during the transition period. The Government of India consider that the applications submitted by these three industries also call for immediate investigation.

4. For the purpose of these and any subsequent investigations, the Government of India have decided to set up a Tariff Board for a period not exceeding two years, in the first instance. The Board will consist of :—

PRESIDENT :

Sir R. K. Shanmukham Chetty, K.C.I.E.

MEMBERS :

Mr. C. C. Desai, C.I.E., I.C.S.

Prof. H. L. Dey, D.Sc. (London).

The Board will include one more Member whose name will be announced shortly. Mr. Desai will act as Secretary to the Board in addition to his duties as Member.

5. The Tariff Board is requested to undertake, in such order as it thinks fit, the investigation of claims put forward by the industries specified in paragraphs 2 and 3 above. In the case of each industry the Board will, after such examination as it considers necessary, report whether the industry satisfies the following conditions :—

(1) that it is established and conducted on sound business lines ; and

(2) (*a*) that, having regard to the natural or economic advantages enjoyed by the industry and its actual or probable costs, it is likely within a reasonable time to develop sufficiently to be able to carry on successfully without protection or State assistance ; or

(*b*) that it is an industry to which it is desirable in the national interest to grant protection or assistance and that the probable cost of such protection or assistance to the community is not excessive. Where a claim to protection

or assistance is found to be established, i.e., if condition (1) and condition (2) (*a*) or (*b*) are satisfied, the Board will recommend—

(i) whether, at what rate and in respect of what articles, or class or description of articles, a protective duty should be imposed ;

(ii) what additional or alternative measures should be taken to protect or assist the industry ; and

(iii) for what period, not exceeding three years, the tariff or other measures recommended should remain in force.

In making its recommendations the Board will give due weight to the interests of the consumer in the light of the prevailing conditions and also consider how the recommendations affect industries using the articles in respect of which protection is to be granted. Since relief, to be effective, should be afforded without delay, the Board is requested to complete its enquiries with all possible expedition and to submit a report as soon as the investigation of the claim of each industry is concluded.

6. The headquarters of the Board will be at Bombay, but it will visit such other places as it thinks necessary for purposes of its enquiries. Firms and persons interested in any of these industries, or in industries dependent on the use of the products of these industries, who desire that their views should be considered, should address their representations to the Secretary to the Board.

7. Any claims hereafter received from other industries which in the opinion of the Government of India are suitable for examination by the Board will be referred to the Board in due course for examination.

8. The Government of India trust that Provincial Governments and Administrations will afford the Board all the assistance which it may require and will comply with any request for information which may be addressed to them by it.

N. R. PILLAI,

Secretary.

APPENDIX II.

List of producers to whom the questionnaire was issued.

1. Annapurna Metal Works, Calcutta.
2. Ashok Manufacturing Co., Ltd., Lahore.
3. Bombay Brass Works, Jullunder City.
4. Banarsi Shah Charan Singh, Gujranwala, Punjab.
5. Binani Metal Works, Ltd., Howrah, Calcutta.
6. Bengal Ingot Co., Ltd., Kidderpore, Calcutta.
7. Bombay Metals & Alloys Mfg. Co., Ltd., (Gerhard Gabriel), Bombay.
8. Bharat Cable & Rubber Works, Ltd., Delhi.
9. Bangalore White Lead Syndicate, Bangalore.
10. Bengal Wire Nails Co., Ltd., Park Circus, Calcutta.
11. Baroda Steels Ltd., Bombay.
12. Battacharaya P. K. & Co., Calcutta.
13. Devi Dayal & Sons, Bombay.
14. Dan Decker & Co., Mahim, Bombay.
15. Eyre Smelting Co., Calcutta.
16. General Metal Industries, Mirzapur.
17. Ganga Metal Refinery & Co., Calcutta.
18. Gulamally Abdulhussein & Co., Bombay.
19. Govardhandas P. A., Jullunder City.
20. Gupta Rolling Mills, Bombay.
21. Gujranwala Metal Works, Gujranwala, Punjab.
22. Hindustan Metal Refinery & Rolling Mills, Ltd., Madras.
23. Hindustan Wire Products Co., Benares.
24. Indian Cable Co., Ltd., Tatanagar.
25. Indian Copper Corporation Ltd., Ghatsila (Singhbhum) B. N. Rly.
26. Indian Standard Metal Co., Ltd., Bombay.
27. Indian Metal Refinery, Sewree, Bombay.
28. Indian Smelting & Refining Co., Ltd., Bombay.
29. India Rolling Mills, Calcutta.
30. Indian Red Lead Factory, Ltd., Tollygunge, Calcutta.

31. Indian Lead Products, Calcutta.
32. Indian Metal & Metallurgical Corporation, Madras.
33. Jaipur Metal Industries Ltd., Jaipur.
34. Jayant Metal Mfg. Co., Ltd., Bombay.
35. Kāmani Metals & Alloys Ltd., Kurla, Bombay.
36. Kamani Engineering Corporation, Lahore.
37. Lillooah Steel & Wire Products, Ltd., Calcutta.
38. Leslie W. & Co., Ltd., Punjab.
39. Lalloobhai Aminchand, Bombay.
40. Metal Corporation of India, Ltd., Tundoo, Katrasgarh, E. I. Rly.
41. Metallica Works, Bombay.
42. National Screw & Wire Products, Ltd., Belur, E. I. Rly.
43. Non-Ferrous Metals & Refinery Ltd., Mazagaon, Bombay.
44. National Rolling Mills, Ltd., Calcutta.
45. National Insulated Cable Co. of India Ltd., Calcutta.
46. National Copper Tube Mfg. Co., Ltd., Karachi.
47. National Pipes & Tubes Co., Ltd., Calcutta.
48. National Iron & Steel Co., Ltd., Calcutta.
49. Octavious Steel Co., Managing Agents, Venesta Ltd., Calcutta.
50. Omega Metal Refinery, Calcutta.
51. Pragdas Girdhardas, Calcutta.
52. Prakash Engineering Co., Duliagunj, Agra.
53. Refinery H. G., Connagar, Hooghly.
54. Saru Smelting & Refining Corporation, Meerut.
55. Steel & General Mills Co., Ltd., Moghulpura, Lahore.
56. Shaparia Dock & Steel Co., Ltd., Bombay.
57. Stone J. & Co., India Ltd., Kidderpore, Calcutta.
58. Sharma S. R. & Sons, Calcutta.
59. Tarruck R. & Co., Lillooah, Calcutta.
60. Technice, Bombay.
61. United Metal Works, Amritsar.
62. Waldie D. & Co., Calcutta.
63. Waldies Industries Ltd., Calcutta.

Besides the views of the following Associations were also sought.

1. All India Non-Ferrous Metalware Manufacturers' Association, Bombay.
2. Federation of British Industries, Calcutta.
3. Indian Non-Ferrous Metals Manufacturers' Association, Calcutta.
4. India Committee of Cable Makers' Association, Calcutta.
5. Southern India Metal Distributors' Association, Madras.

APPENDIX III.

List of consumers to whom the questionnaire was issued.

1. Ahmed A. Fazalbhoy & Co., Calcutta.
2. All India Non-ferrous Metalware Mfg. Association, Bombay.
3. Balmer Laurie & Co., Ltd., Calcutta.
4. Brass and Copper Merchants' Association, Farukhabad, U. P.
5. Bombay Municipal Corporation, Bombay.
6. Benares Brass Merchants' Association, Benares.
7. British Metal Corporation, Calcutta.
8. Controller of Stores, G. I. P. Railway, Bombay.
9. Controller of Stores, B. B. & C. I. Railway, Bombay.
10. Controller of Stores, Bombay Telephones, Bombay.
11. Controller of Telegraph Stores, Alipore, Calcutta.
12. Chief Electrical Engineer, Government of Madras, Madras.
13. Chief Electrical Engineer, Government of Travancore, Trivandrum.
14. East India Metal Merchants' Association, Calcutta.
15. Federation of Metal Associations, Mirzapur.
16. Federation of Punjab Metal Merchants' Association, Delhi.
17. Federation of Punjab Metal Merchants' Association, Amritsar.
18. Gillanders Arbuthnot & Co., Clive Street, Calcutta.
19. Galvanized Steel Products (1941) Ltd., Calcutta.
20. General Manager, M. S. M. Railway, Madras.
21. General Manager, B. B. C. I. Railway, Bombay.
22. Greaves Cotton Crompton Parkinsons, Ltd., Calcutta.
23. Hand Made Brass and Copper Utensils Mfg. Association, Muttra.
24. Hindu-Muslim Metal Mfgs. Association, Moradabad.
25. Hyderabad Brass Products, Ltd., Hyderabad (Dn.).
26. His Majesty's Mint, Bombay.
27. Indian Copper Corporation, Ghatsila.
28. Imperial Galvanising Works, Calcutta.
29. Indian Cable Company, Ltd., Calcutta.
30. Indian Steel and Wire Products Ltd., Tatanagar.
31. Kasara Association, Hapur.

32. Martin and Company, Calcutta.
33. Metal Exchange Association Ltd., Bombay.
34. Metalware Dealers' and Manufacturers' Association, Hathres, U. P.
35. Metal Merchants' Association, Moradabad.
36. Metal Hardware Manufacturers' Association, Punjab.
37. National Insulated Cable Co. of India Ltd., Calcutta.
38. National Rolling Mills, Ltd., Calcutta.
39. National Metal Industries Ltd., Calcutta.
40. Octavious Steel & Co., Ltd., Managing Agents of Electric Supply Co., Ltd., Calcutta.
41. South Madras Electric Supply Corporation Ltd., Trichinopoly.
42. South Indian Metal Distributors' Association, Madras.
43. Superintendent, Gun Carriage Factory, Jubbulpore.
44. Superintendent, Metal & Steel Factory, Ishpore.
45. Superintendent, Bran Gun Factory, Secunderabad.
46. Superintendent, Ordnance Factory, Khamana.
47. Superintendent, Cordite Factory, Arvonkadh.
48. Superintendent, Ammunition Factory, Kirkee.
49. Tata Iron and Steel Co., Ltd., Bombay.
50. Volkart Bros., Ltd., Calcutta.
51. Waldie D. & Co., Ltd., Calcutta.

APPENDIX IV

List of importers to whom the questionnaire was issued.

1. British Insulated Cables Ltd., Calcutta.
2. British Metal Corporation (India) Ltd., Calcutta.
3. Baghat Singh Bugga & Co., Calcutta.
4. Balsara & Co., Bombay.
5. Balmer Lawrie & Co., Calcutta.
6. Clubwalla & Co., Bombay.
7. Chotlal Kusaldas, Kosala Mohalla, Bombay.
8. Devi Dayal & Sons, Bombay.
9. Greaves Cotton & Co., Bombay.
10. Gillanders Arbuthnot & Co., Calcutta.
11. Gulamalli Abdulhussein & Co., Bombay.
12. Henley's Telegraph Works Co. of India Ltd., Calcutta.
13. Indian Cable Co., Ltd., Tatanagar.
14. India Committee of Cable Makers' Association, Calcutta.
15. Metal Exchange Association Ltd., Bombay.
16. Mitra S. & Co., Bombay.
17. Mathurdas Govardhandas, Calcutta.
18. National Insulated Cable Co. of India Ltd., Calcutta.
19. Parsotamdas Narsingdas, Calcutta.
20. Pragdas Girdhardas, Calcutta.
21. Pragdas Mathurdas, Calcutta.
22. Radhakissan Hazare, Calcutta.
23. Volkart Brothers, Bombay.
24. Wright R. & Partners Ltd., New Delhi.
25. Waldie D. & Sons, Calcutta.
26. William Jacks Co., Calcutta.

APPENDIX V

List of factories visited by or on behalf of the Board.

Serial No.	Name of Factory	Visited by	Date.
1	Indian Cable Co., Ltd., Tatanagar	Mr. Desai	3rd August 1946.
2	Indian Copper Corporation Ltd., Ghatsila	Mr. Desai Mr. Kapur Mr. Rao	3rd August 1946. 1st, 2nd and 3rd 1946.
3	Binani Metal Works Ltd., Calcutta " "	Mr. Desai Dr. Dey Mr. Kapur	5th August 1946.
4	India Rolling Mills Ltd., Calcutta	Mr. Rao Mr. Kapur	5th August 1946. 21st June 1946.
5	National Rolling Mills Ltd., Calcutta	Mr. Desai Dr. Dey Mr. Rao Mr. Kapur	6th August 1946. 22nd June 1946 and 6th August 1946.
6	National Insulated Cable Co. of India Ltd., Calcutta.	Mr. Desai Dr. Dey Mr. Rao Mr. Kapur	6th August 1946. 22nd June 1946 and 6th August 1946.
7	Indian Red Lead Products Ltd., Calcutta	Mr. Desai Mr. Kapur	5th August 1946.
8	Eyre Smelting Works, Calcutta	Mr. Desai Mr. Kapur	5th August 1946.
9	Bengal Ingot Co., Calcutta	Mr. Desai Dr. Dey Mr. Kapur	7th August 1946.
10	Jaipur Metal Works Ltd., Jaipur	Mr. Desai Dr. Nazir Ahmad Dr. Dey Mr. Rao Mr. Kapur	24th August 1946. 18th August 1946. 24th August 1946.

Serial No.	Name of Factory.	Visited by	Date.
11	Kamani Metals & Alloys Ltd., Bombay	Mr. Desai Dr. Nazir Ahmed. Dr. Dey	21st August 1946.
		Mr. Rao	21st August 1946.
		Mr. Kapur	21st August 1946.
12	Metal Corporation of India Ltd., Tundoo	Mr. Kapur	11th August 1946.
13	Bombay Metals & Alloys Mfg. Co., Ltd., Bombay.	Mr. Kapur	23rd July 1946.
14	Devidayal & Sons, Bombay	Mr. Kapur	24th July 1946.
15	Standard Metals & Alloys Ltd., Bombay	Sir Shanmukham Chetty. Mr. Desai Dr. Nazir Ahmad Dr. Dey	31st July 1946.
		Mr. Kapur	29th July 1946.
16	Metal Rolling Works, Bombay	Sir Shanmukham Chetty. Dr. Nazir Ahmad. Mr. Kapur	27th July 1946.
17	Lallubhai Aminchand, Bombay	Mr. Kapur	27th July 1946.
18	Jayant Metal Manufacturing Co., Bombay	Sir Shanmukham Chetty. Mr. Desai Dr. Nazir Ahmad. Dr. Dey	31st July 1946.
		Mr. Kapur	24th July 1946.

APPENDIX VI

List of factories whose accounts were examined by the Cost Accounts Officer.

1.	Indian Copper Corporation Ltd., Ghatsila ..	From 1st to 3rd August 1946.
2.	National Rolling Mills Ltd., Calcutta ..	From 5th to 7th August 1946.
3.	National Insulated Cable Co. of India Ltd., Calcutta.	From 8th to 10th August 1946.
4.	Jaipur Metal Industries Ltd., Jaipur ..	From 17th to 18th August 1946.
5.	Kamani Metal & Alloys Ltd., Bombay ..	From 21st to 24th August 1946.

APPENDIX VII

List of witnesses examined by the Board, the interest represented by them and the dates on which they were examined.

No.	Name of the witness.	Interest represented.	Date on which examined.
1	All-India Non-ferrous Metalware Manufacturers' Association, Bombay, represented by:— Mr. V. H. Shah (of Lahore) Mr. C. P. Bhatt and Mr. R. M. Shah.	Association of importers and consumers.	11th to 14th September.
2	Ashok Manufacturing Co., Lahore, represented by:— Mr. Ashoknath.	Producers of manufactures (sanitary fittings).	14th and 16th September.
3	B. B. & C. I. Railway, Bombay, represented by:— Mr. Vacha.	Consumers ..	11th and 12th September.
4	Bengal Ingot Co., Ltd., Calcutta, represented by:— Mr. W. E. Bell.	Producers of secondary metals and alloys.	11th and 12th September.
5	Binani Metal Works Ltd., Calcutta, represented by:— Mr. G. D. Binani.	Do. ..	12th and 13th September.
6	Bombay Brass Works Co., Jullunder City, represented by:— Mr. S. I. Huq.	Producers of sanitary fittings.	11th September.
7	Bombay Metals and Alloys Manufacturing Co., Ltd., Bombay, represented by:— Mr. G. L. Gabriel and Mr. F. S. Levy.	Producers of secondary metals and alloys.	11th, 12th and 13th September.
8	Bombay Metal Mart, Bombay, represented by:— Mr. C. M. Motani.	Importers and consumers.	11th, 12th and 13th September.
9	Devi Dayal and Sons, Bombay, represented by:— Mr. T. T. Ghandhi.	Producers of secondary metals and semi-manufacturers.	11th, 12th and 13th September.
10	Federation of British Industries, Calcutta, represented by:— Mr. Tyabjee.	Foreign (British interest).	10th September.
11	G. I. P. Railway, Bombay, represented by:— Mr. Killawala.	Consumers ..	11th and 12th September.
12	Goverdhandas P-A., Jullunder City, represented by:— Mr. B. L. Kamal.	Producers of sanitary fittings.	11th to 14th September.

No.	Name of the witness.	Interest represented.	Date on which examined.
13	Greaves Cotton & Co., Bombay, represented by :— Mr. D. M. Bharucha and Mr. Kemp.	Importers ..	11th, 12th, 13th and 14th September.
14	General Electric Co., (India) Ltd., Bombay, represented by :— Mr. E. Penn.	Importers ..	11th September.
15	Indian Cable Co., Calcutta, represented by :— Mr. J. D. MacIntosh.	Consumers (Electrolytic rods).	11th September.
16	Indian Copper Corporation, Ghatsila, represented by :— Mr. R. R. Dempster and Mr. Berry.	Producers of virgin metal (copper).	10th and 11th September.
17	India Committee of Cable Makers' Association, Calcutta, represented by :— Mr. F. Moore.	Association of importers of cables.	11th September.
18	Indian Non-ferrous Metal Manufacturers' Association, Calcutta, represented by :— Mr. C. C. Thakkar, Mr. G. L. Gabriel, Mr. G. D. Binani, Mr. J. H. Mehta, and Mr. C. G. Chandrasekar.	Association of producers.	11th to 14th and 16th September
19	Indian Smelting and Refining Co., Ltd., Bombay, represented by :— Mr. B. Reiser, and Mr. B. K. Nevatia.	Producers of secondary metals.	12th, 13th and 14th September.
20	Indian Standard Metal Co., Ltd., Bombay, represented by :— Mr. F. R. Goldschmidt.	Do. ..	11th, 12th, 13th and 14th September.
21	Jaipur Metal Industries Ltd., Jaipur, represented by :— Mr. R. H. Kamani.	Producers of secondary metals and semi-manufactures.	11th, 12th and 13th September.
22	Jayant Metal Manufacturing Co., Bombay, represented by :— Mr. Chimanlal Parek.	Producers of manufactures.	12th and 13th September.
23	Kamani Metal and Alloys Ltd., Bombay, represented by :— Dr. Jivraj Mehta, Dr. C. A. Mehta, and Mr. P. R. Kamani.	Producers of secondary metals and semi-manufactures.	11th to 14th September.
24	Mond Nickel Company, London, represented by :— Mr. McNeil.	Importers ..	11th, 12th and 13th September.

No.	Name of the witness.	Interest represented.	Date on which examined.
25	Metal Exchange Association, Bombay, represented by :— Mr. Chimanlal.	Importers and consumers.	12th and 13th September.
26	Metal Corporation of India, Ltd., Calcutta, represented by :— Mr. A. T. Ganguli, and Mr. A. C. Dutta.	Producers of virgin metal (lead).	16th September.
27	National Insulated Cable Co. of India Ltd., Calcutta, represented by :— Mr. T. S. Sitapati.	Producers of wires and cables and consumer of rods.	11th and 12th September.
28	National Rolling Mills Ltd., Calcutta, represented by :— Mr. T. S. Sitapati.	Producers of electrolytic wire rods.	11th and 12th September.
29	Southern India Metal Distributors' Association, Madras, represented by :— Mr. J. P. Sanghrajka.	Association of importers and consumers.	11th to 14th September.
30	Prakash Engineering Works, represented by :— Mr. B. N. Gupta.	Producers of secondary metals and alloys and semi-manufacturers.	13th September.
31	Tata Iron and Steel Co., Ltd., represented by :— Mr. S. K. Nanavathy, and Mr. Das.	Consumers ...	11th to 13th September.

APPENDIX VIII

Statement showing the estimated cost of production of copper by the Indian Copper Corporation Ltd.

Estimated quantity of output : 7000 long tons per annum.

Items.	*Amount per ton.* Rs.
I. Manufacturing Expenses—	
1. Raw Materials	....
2. Power and fuel	100·60
3. Ordinary current repairs and maintenance of buildings, plant and machinery.	117·33
4. Labour	281·44
5. General services, supervision and local office charges..	107·92
6. Expenditure on quality control, research and development.	8·71
7. Packing charges	....
8. Miscellaneous, water, lighting, royalties, consumable stores etc.	279·18
Total ..	895·18
II. Overhead Charges—	
9. Depreciation at statutory rates	52·73
10. Interest on working capital	19·43
11. Managing Agents' charges	....
12. Directors' and Auditors' fees	21·17
13. Insurance	11·02
14. Rents, rates and taxes excluding income-tax and royalties.	1·90
15. Selling expenses	....
16. Miscellaneous	6·28
Total ..	112·53
Gross total I and II ..	1007·71
Credit for materials recovered ..	Nil.
Net total ..	1007·71
Profit at 10 per cent. on fixed capital	61·43
Fair selling price	1069·14
	Rs. a. p.
Or	1,069 2 0

APPENDIX IX

Graph indicating the trend of world prices and world production during 1930 to 1946 of :—

(i) Copper ;

(ii) Lead ;

(iii) Zinc ;

and (iv) Tin.

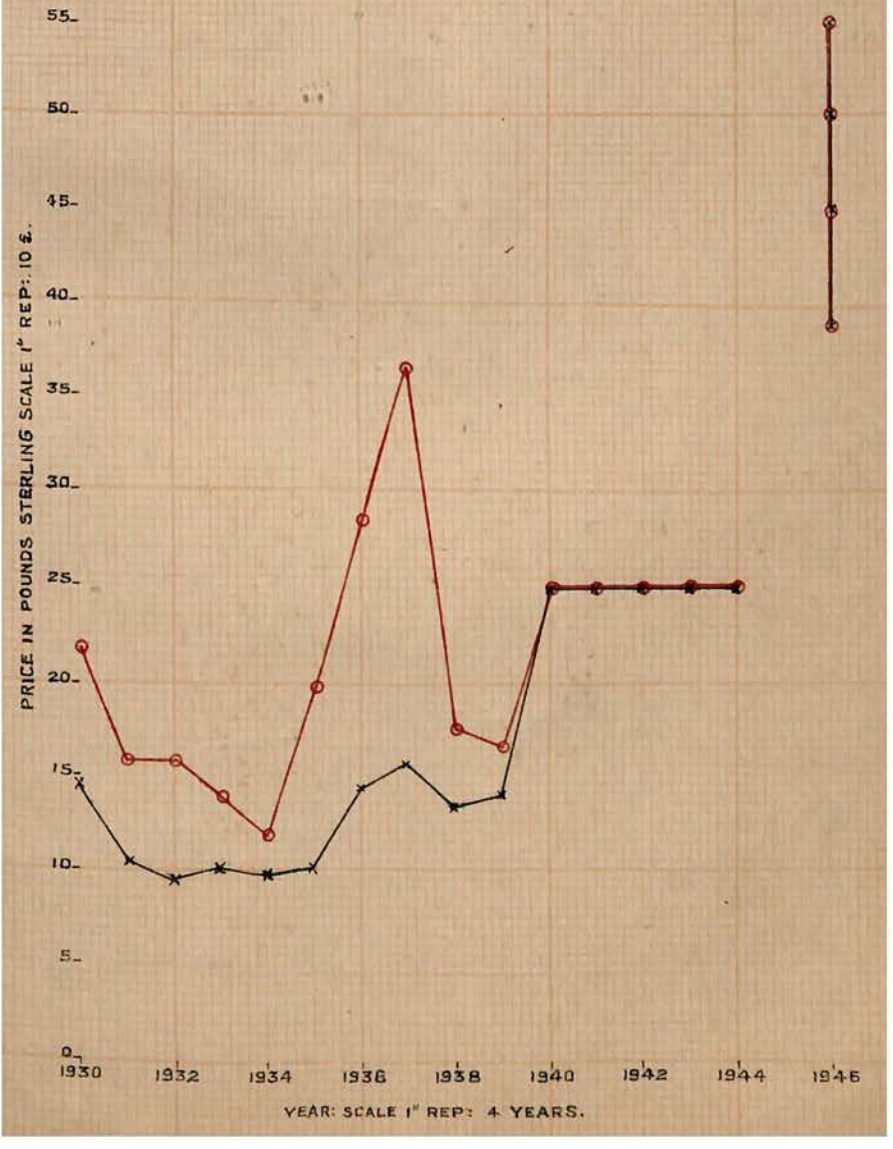
COPPER

MAXIMUM AND MINIMUM U.K. PRICES IN POUNDS STERLING PER LONG TON.
(RED LINE REPRESENTS MAXIMUM PRICES AND BLACK LINE REPRESENTS MINIMUM PRICES).

G.P.E., POONA, 1946

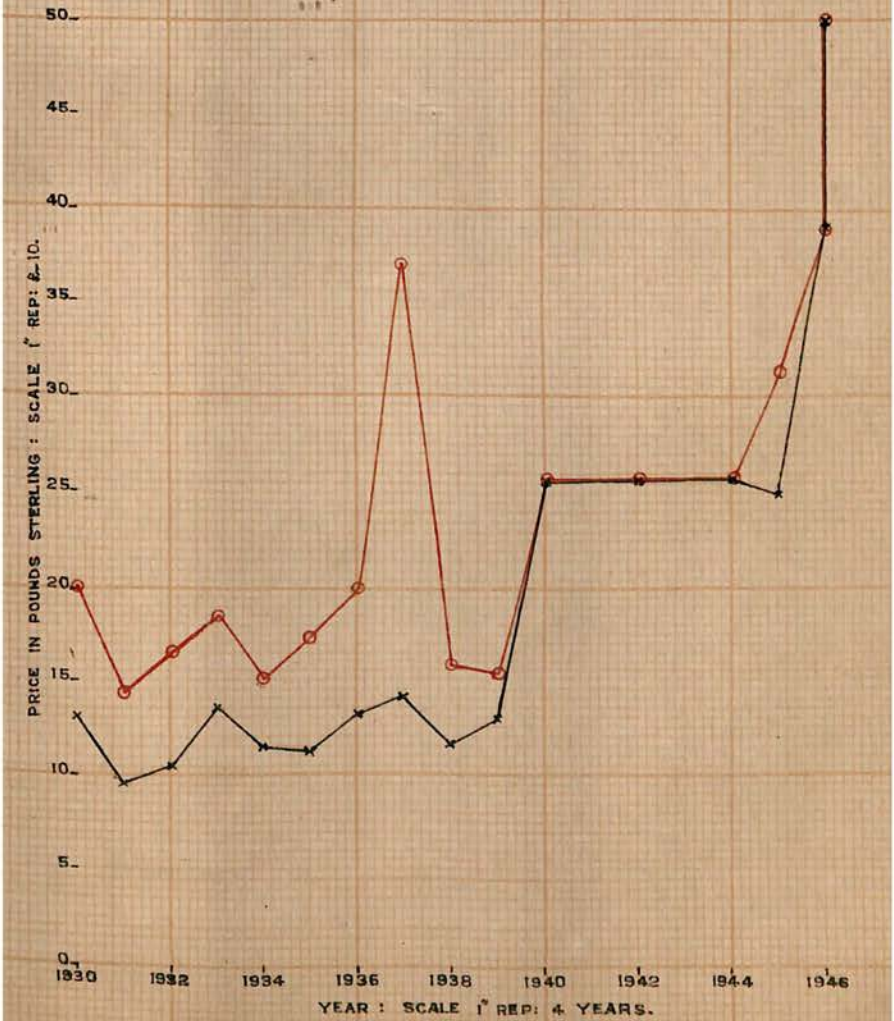
SOFT LEAD

MAXIMUM AND MINIMUM PRICES IN POUNDS STERLING PER LONG TON. (RED LINE REPRESENTS MAXIMUM PRICES AND BLACK LINE REPRESENTS MINIMUM PRICES).



SPELTER (ZINC)

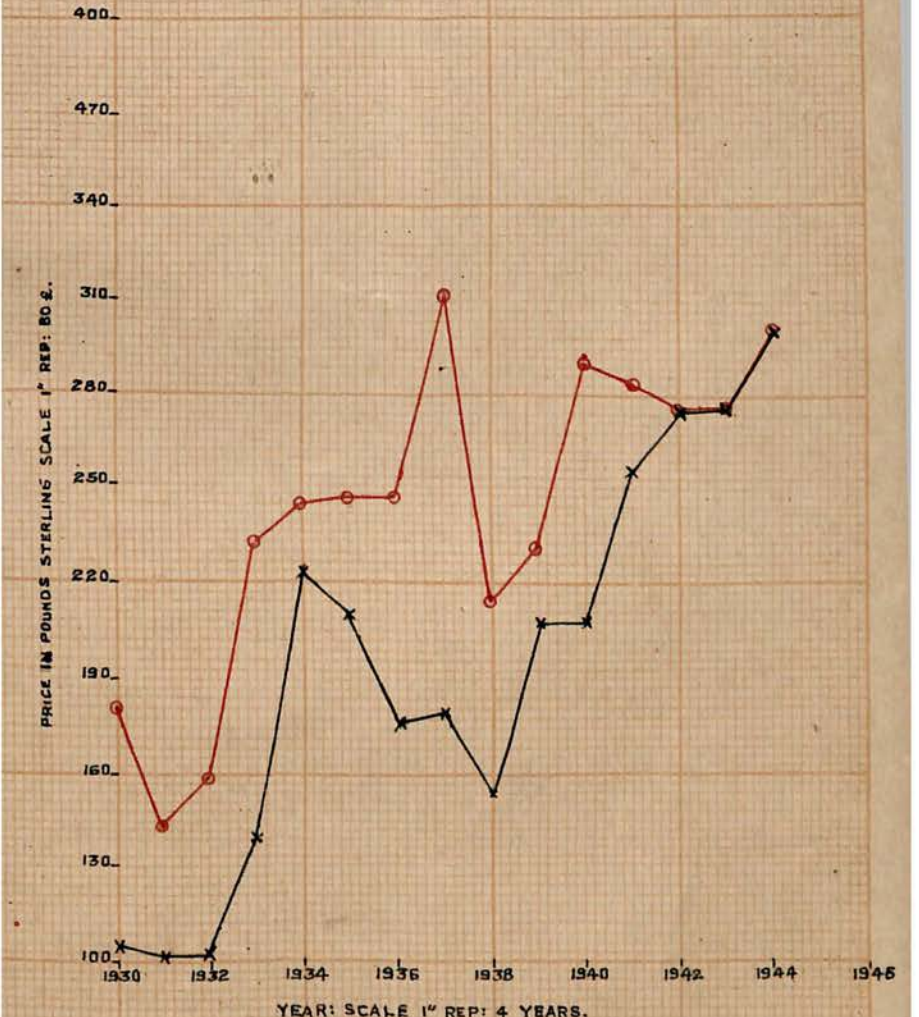
MAXIMUM AND MINIMUM PRICES IN POUNDS STERLING PER LONG TON. (RED LINE REPRESENTS MAXIMUM PRICES AND BLACK LINE REPRESENTS MINIMUM PRICES).



G.P.S.P. POONA, 1946.

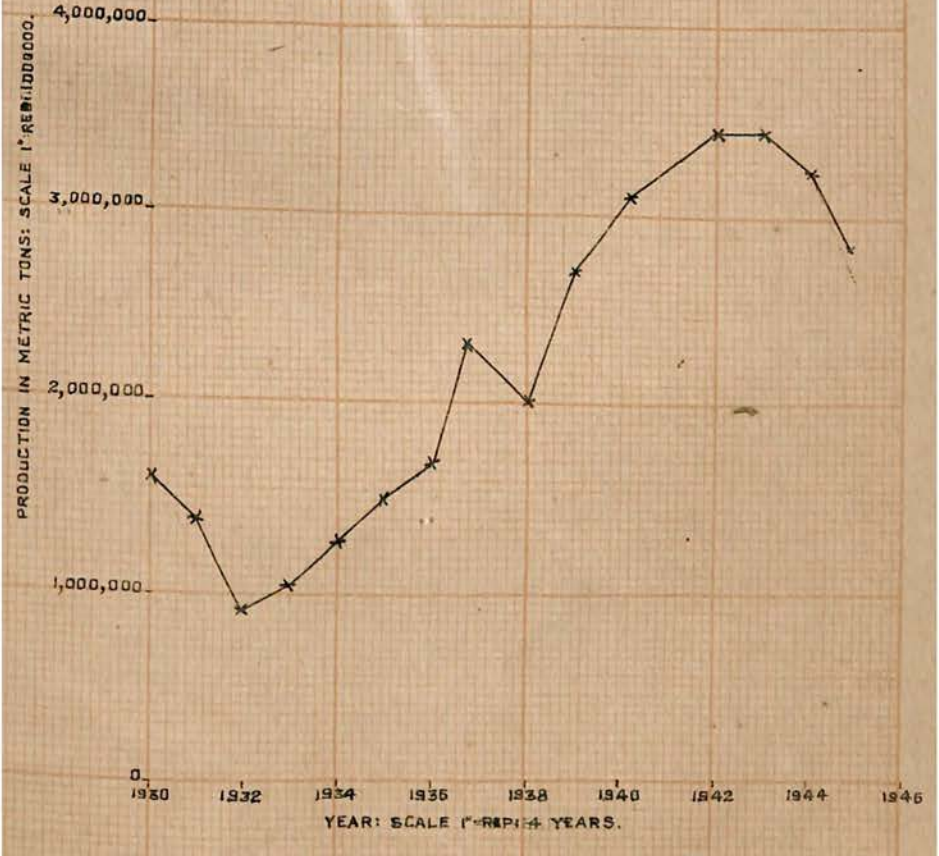
TIN

MAXIMUM AND MINIMUM U.K. PRICES IN POUNDS STERLING PER LONG TON. (RED LINE REPRESENTS MAXIMUM PRICES AND BLACK LINE REPRESENTS MINIMUM PRICES).



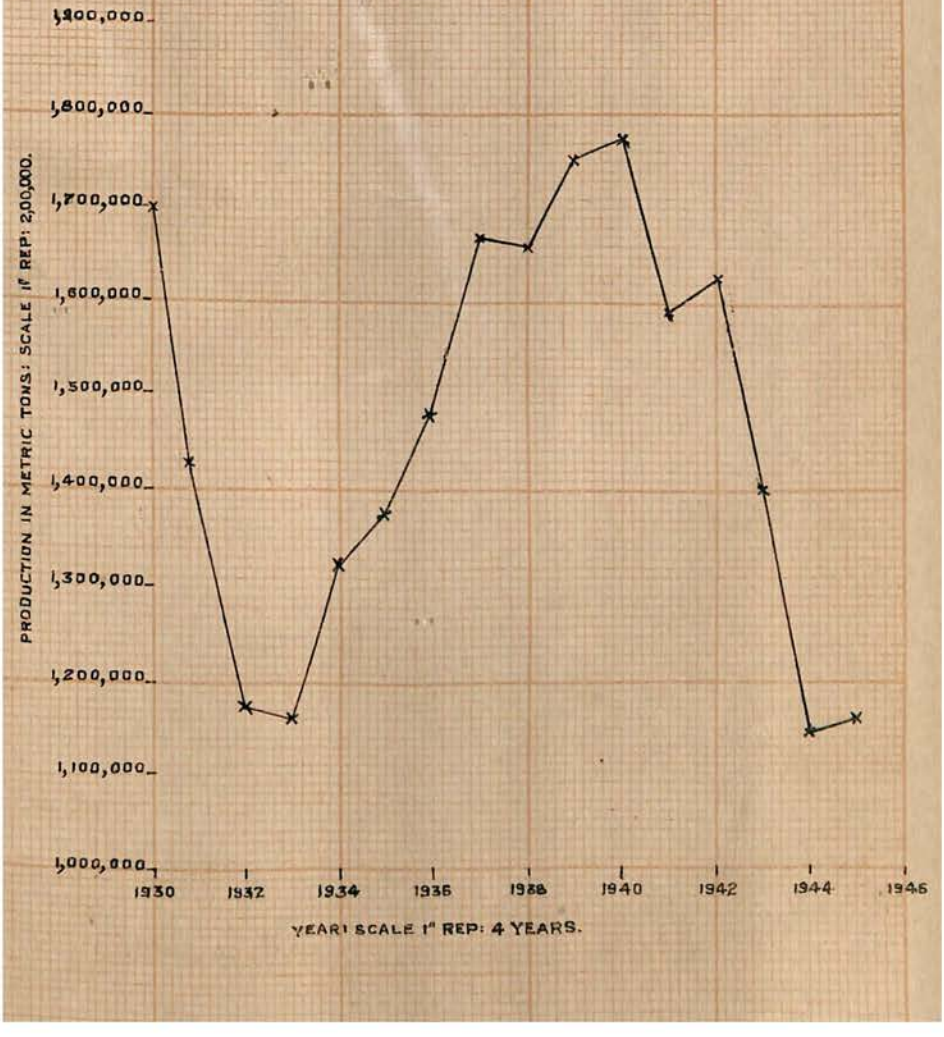
S.P.C.P. POONA, 1946.

COPPER
WORLD PRODUCTION.

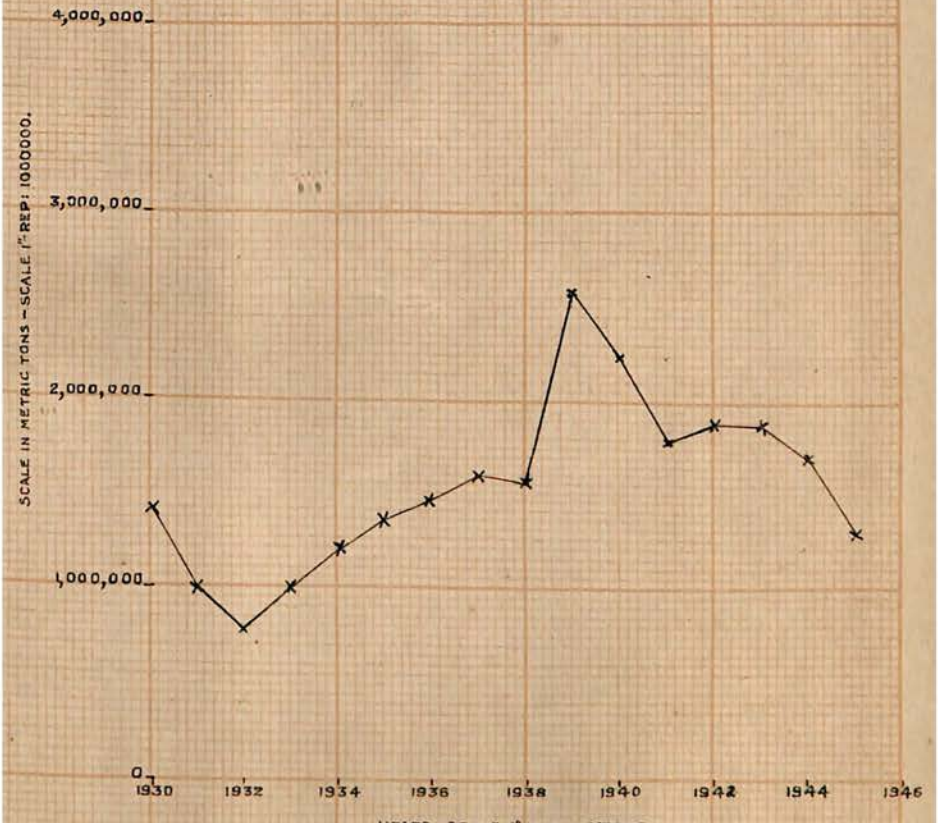


G.P.Z.P. POONA, 1946.

LEAD
WORLD PRODUCTION

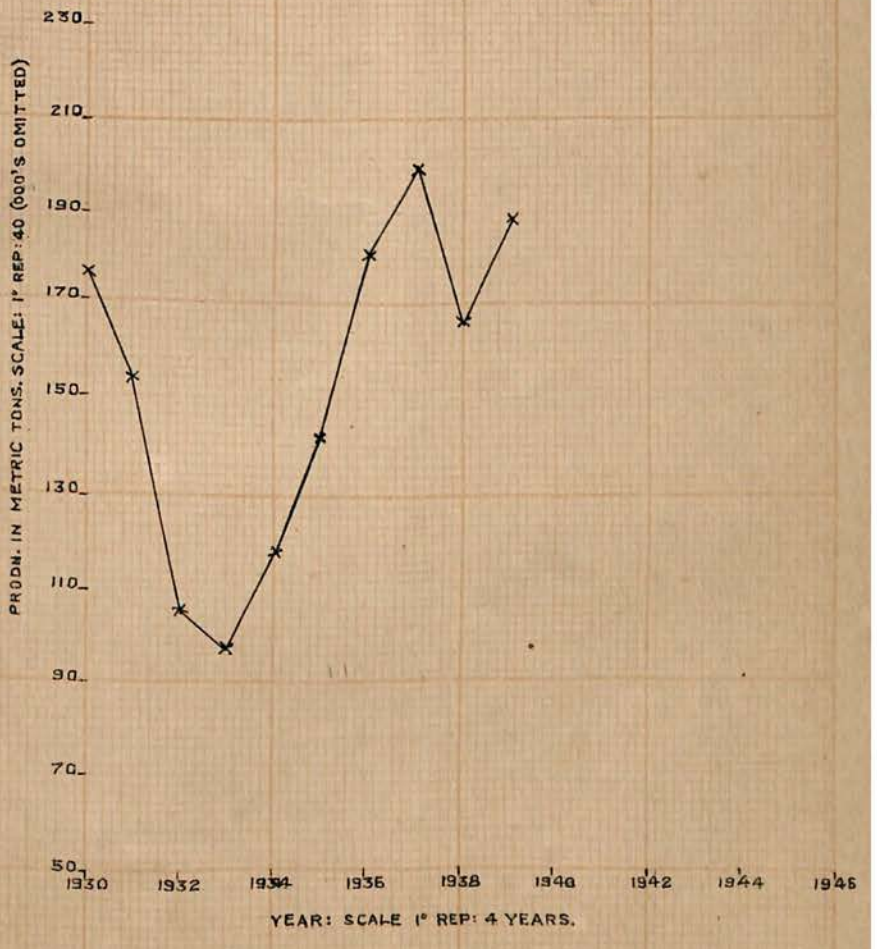


ZINC
WORLD PRODUCTION



G.P.Z.P. POONA, 1946.

TIN WORLD PRODUCTION IN METRIC TONS (000'S OMITTED)
(NOTE:-WORLD PRODUCTION FIGURES AFTER 1939 ARE NOT-DEFINITELY KNOWN).



G.P.Z.P. POONA, 1946.

APPENDIX X.

(i) STATISTICS OF EXPORT :—*Statement showing the total quantity and value of exports (private and Government stores) of non-ferrous metals (mainly scrap) from India, since 1937-38.*

Year.	Copper.		Lead.		Tin.		Zinc or spelter.		Brass, bronze and other similar alloys and manufactures thereof (wrought).	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity	Value.
	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.
1937-38	267·90	3,02,451	306·40	1 28,756	3573·95	4,09,556	517·20	26,852	747·10	10,87,370
1938-39	148·45	1,63,160	341·30	1,49,894	3316·65	2,66,545	326·75	40,902	578·15	8,21,094
1939-40	136·20	1,77,480	991·15	5,27,481	1485·70	1,50,333	283·50	12,974	556·00	8,32,933
1940-41	113·45	1,95,405	687·80	5,01,987	1266·15	5,00,991	193·50	10,563	735·90	12,32,691
1941-42	55·70	1,30,913	2967·05	20,75,705	142·25	2,30,734	1·25	1,812	223·20	5,43,888
1942-43	18·80	2,29,226	748·50	5,54,584	1·40	2,948	6·45	23,311	90·10	5,36,284
1943-44	10·85	43,250	7·70	11,561	0·80	3,623	0·15	589	87·15	9,08,589
1944-45	3·85	2,476	86·90	2,02,400	105·50	4,15,380	0·05	206	299·35	43,10,662
1945-46 (for nine months only, April to December, 1945).	5·10	13,916	14·70	35,888	0·10	202	0·15	356	188·35	17,58,368

Years.	Copper (excluding ore).		Lead.		Tin.		Zinc or Spelter.		Brass, Bronze, and similar alloys.		German silver (including nickel silver).		Unenumerated metals.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons. (000)	Rs. (000)	Tons. (000)	Rs. (000)	Tons. (000)	Rs. (000)	Tons. (000)	Rs. (000)	Tons. (000)	Rs. (000)	Tons. (000)	Rs. (000)	Tons. (000)	Rs. (000)
1936-37* ..	12	86,75	1	5,16	2	65,41	23	49,86	16	97,69	1	14,19	1	5,20
1937-38 ..	19	1,50,96	9	31,89	3	95,49	22	76,86	11	87,38	1	14,47	1	11,61
1938-39 ..	11	88,01	8	21,46	3	73,06	26	56,40	16	1,06,26	2	16,42	2	19,08
1939-40 ..	16	1,33,22	14	45,76	4	1,30,03	23	59,82	10	73,25	1	10,70	1	7,85
1940-41 ..	17	1,63,22	16	60,73	4	1,03,54	23	97,07	4	48,10	1	5,63	1	15,32
1941-42 ..	18	1,90,59	18	71,86	4	1,60,94	16	1,00,72	4	56,35	1	3,90	2	22,77
1942-43 ..	18	1,73,68	2	16,98	..	2,32	12	74,99	2	28,99	..	4	1	15,04
1943-44 ..	16	1,59,85	1	4,49	..	44	2	8,84	1	15,56	..	..	..	5,33
1944-45 ..	19	1,92,74	1	4,54	..	35	3	20,13	1	21,80	..	..	..	10,10
1945-46† ..	10	1,02,64	22	98,68	..	2,62	5	26,77	6	84,64	..	..	1	11,84

*Excluding imports into Burma.

†For nine months only, from April to December 1945.

APPENDIX XI

Estimated Indian requirements of Yellow Metal.

	Tons.
(*a*) Railways' requirements	15,000
(*b*) Gunmetal Castings	15,000
(*c*) Brass ingots likely to be used for castware utensils and other articles made by cottage workers.	10,000
(*d*) Melting capacity required for manufacturing 40,000 tons of brass and copper sheets, being the estimated requirements.	45,000
(*e*) Melting capacity required for brass and copper rods (estimated at 3,000 tons).	4,000
(*f*) Melting capacity required for brass and copper wires (estimated at 2,000 tons).	2,500
(*g*) Miscellaneous requirements	5,000
	96,500

APPENDIX XII

Annual productive capacity of yellow metals in India.

Name of Plant.	Location.	Peak production Capacity.
		Tons.
1. Indian Copper Corpotation Ltd. ..	.. Ghatsila ..	20,000
2. Jaipur Metal Industries Ltd. ..	.. Jaipur ..	7,500
3. Kamani Metals & Alloys Ltd. ..	.. Bombay ..	7,500
4. Binani Metal Works Ltd. ..	.. Calcutta ..	6,000
5. Bombay Metal & Alloy Mfg. Co., Ltd. ..	.. Bombay ..	5,500
6. National Screw & Wire Products Ltd. ..	.. Belur (Howrah) ..	4,800
7. India Smelting & Refining Co., Ltd. ..	.. Bombay ..	4,000
8. India Metal Refinery ..	.. Do. ..	3,800
9. Prakash Engineering Co. ..	.. Agra ..	3,500
10. Bengal Ingot Co., Ltd. ..	.. Calcutta ..	3,250
11. Indian Standard Metal Works Ltd. ..	.. Bombay ..	3,000
12. Saru Smelting & Refining Corp. ..	.. Meerut ..	3,000
13. Hindustan Metal Refinery & Rolling Mills ..	.. Madras ..	3,000
14. Devi Dayal & Sons ..	.. Bombay ..	2,400
15. Gupta Rolling Mills & Refineries ..	.. Bombay ..	1,800
16. Baroda Steels Ltd. ..	.. Baroda ..	1,800
17. Bombay Metal Rolling Works ..	.. Bombay ..	1,800
18. Omega Metal Refinery Ltd. ..	.. Calcutta ..	1,200
19. India Rolling Mills Ltd. ..	.. Do. ..	1,000
20. Lilloah Steel & Wire Co., Ltd. ..	.. Howrah ..	700
21. General Metal Industries ..	.. Mirzapur ..	700
22. Metallica Works ..	.. Bombay ..	500
23. Indian Metal & Matallurgical Corporation	.. Madras ..	500
24. Others ..	.. ....	12,400
		1,00,000

APPENDIX XIII

The Common Non-Ferrous Industrial Alloys.

The Non-Ferrous industrial alloys now number several thousand. The following table includes a few of those most commonly used. The composition, even of the alloys listed, varies between fairly wide limits with a corresponding variation in physical properties and applications.

The information given under " Uses " is intended merely to indicate the general nature of the alloy.

Name.	Composition	Per cent.	Uses.
Admiralty metal ..	Copper ..	70	Condenser tubes for use with salt water. Marine fittings.
	Zinc ..	29	
	Tin ..	1	
Aluminium alloy No. 12 S.A.E. No. 30.	Aluminium ..	92	This alloy with slight variations in composition is the standard aluminium casting alloy used in the United States.
	Copper ..	8	
Aluminium brass ..	Copper ..	70—68	Propeller blades, rudder frames, sea valves.
	Zinc ..	27—31	
	Aluminium ..	1—3	
Aluminium bronze ..	Copper ..	90	Hard, non-corrodible. Used in parts exposed to tanning sulphite and similar corrosive liquors.
	Aluminium ..	10	
Bearing bronze ..	Copper ..	70—90	Bearing of various sorts.
	Tin ..	1—10	
	Lead ..	0—15	
	Zinc ..	0—27	
Gear bronze ..	Copper ..	89	Used for heavy gears usually against steel.
	Tin ..	11	
Gun bronze ..	Copper ..	88	Strong valves and fittings.
	Tin ..	10—8	
	Zinc ..	2	
	Lead ..	2	

Name.	Composition,	Per cent.	Uses.
Phosphor bronze ..	Copper ..	80—77	Bearing metal, wire, rod and steam fittings.
	Tin ..	8—10	
	Lead ..	0—15	
	Phosphorous.	1—0	
Plastic bronze ..	Copper ..	70—50	Bearing metal.
	Lead ..	30—50	
	Nickel ..	trace.	
Silicon bronze ..	Copper ..	96	Telegraph wires, electric work.
	Tin ..	4	
	Silicon ..	traces.	
Babbitt metal ..	Tin ..	70—90	Bearings and anti-friction lining for bronze or steel bushing.
	Antimony ..	7—24	
	Copper ..	2—22	
Bell metal bronze ..	Copper ..	80—75	Bells, gongs etc.
	Tin ..	20—25	
	(sometimes silver, nickel or other metals).		
Brass —			
Gilding metal ..	Copper ..	99—80	Cheap jewelry, gold paint.
	Zinc ..	1—20	
Dutch metal ..	Copper ..	80—76	Thin sheets as substitutes for gold leaf.
	Zinc ..	20—24	
Standard brass ..	Copper ..	73—66	Brass for cold working. Sheets, tubes, cartridges.
	Zinc ..	27—34	
White brass ..	Copper less than .	45	Ornamental castings not requiring strength.
Brazing metal ..	Copper ..	85	
	Zinc ..	15	
Britannia metal ..	Tin ..	95—90	Cheap table ware.
	Antimony ..	5—10	
	Copper ..	1—3	
Chromel (Nichrome) ..	Nickel ..	70—85	Resistance wire for heating units crucibles, triangles, tongs (Patented).
	Chromium (approximate).	15—30	

Name.	Composition,	Per cent.	Uses.
Copper-beryllium ..	Copper ..	97—98	Heat treated to give 200,000 lb. per square inch tensile strength. Used for pump parts, springs, and non-sparking tools.
	Beryllium ..	2—3	
Cupro-nickel brass ..	Copper ..	98—52	Projectile driving bands, rifle bullet caps, electrical resistance, condenser tubes.
	Nickel ..	2—48	
Constantan brass ..	Copper ..	60	Used with copper or iron to make thermo-couples.
	Nickel ..	40	
Delta metal ..	Copper ..	60	
	Zinc ..	40	
	Manganese ..	0·5—0·2	
Dow metal ..	Magnesium ..	85—92	Standard magnesium alloys. Used as castings or forgings.
	Aluminium ..	8—15	
Duralumin brass ..	Aluminium	95—5	Strongest and best of aluminium alloys. Used in airplane and automobile parts.
	Copper	(Approx. 3—0	
	Manganese	Composition). 1—0	
	Magnesium	0—5	
Fusible metals Lipowitz ..	Bismeth ..	50	These and other ternary and quaternary alloys are used for fuse plugs for automatic sprinklers.
	Lead ..	27	
	Tin ..	13	
	Cadmium ..	10	
Woods brass ..	Bismuth ..	38	
	Lead ..	31	
	Tin ..	15	
	Cadmium ..	16	
Gun metal ..	Copper ..	92	Gears, heavy hydraulic castings.
	Tin ..	8—12	
Invar brass ..	Iron ..	64	Used coefficient of expansion. Used in clocks, precison instruments.
	Nickel ..	36	
Magnalium brass ..	Aluminium ..	90—94	Scientific instruments, Balance beams.
	Magnesium ..	10—6	

Name.	Composition,	Per cent.	Uses.
Magnolia metal (Lead-base babbitt).	Lead ..	78	Antifriction, bearing alloy.
	Antimony ..	16	
	Tin ..	6	
Manganin brass ..	Copper ..	82	High electrical resistance and low temperature co-efficient.
	Manganese ..	15	
	Nickel ..	2·3	
	Iron ..	0·6	
Manganese bronze ..	Copper ..	56	Propeller blades, Non-corrodible and great wearing qualities.
	Zinc ..	41	
	Tin ..	0·5	
	Iron ..	1	
	Manganese ..	0·5	
	Aluminium ..	1	
Monel metal ..	Nickel ..	68	Almost non-corrodible. Used for propeller blades, wire, sheets, valves, pumps etc.
	Copper ..	27	
	Iron, Manganese, Silicon ..	5	
Muntz metal ..	Copper ..	60	Sheathing for ships, bolts, nuts, condenser tubes.
	Zinc ..	40	
Naval brass ..	Copper ..	60	Properties like Muntz metal. Less easily corroded by sea water.
	Zinc ..	39	
	Tin ..	1	
Nicklin brass ..	Copper ..	74·5	Resistance wire.
	Nickel ..	25	
	Iron ..	0·5	
Nickel silver (German silver).	Nickel ..	18—25	Table wire, cheap jewellery, base for silver plating.
	Zinc ..	20—30	
	Copper ..	(Remainder).	
Pewter brass ..	Tin ..	85—90	Platters, bowls, cups, etc.
	Antimony ..	15—20	

Name.	Composition,	Per cent.	Uses.
Platinite brass ..	Iron ..	54	Same coefficient of expansion as glass. Used as substitute for platinum in equipping incandescent lamps.
	Nickel ..	46	
	Cobalt ..	0·15	
Platinoid brass ..	Copper ..	60	High resistance wire but not suitable for heating coils.
	Zinc ..	24	
	Nickel ..	14	
	Tungsten ..	1—2	
Shot metal ..	Lead ..	99	Casting bullets and small shots.
	Arsenic ..	1	
Solder :—			
Soft ..	Lead ..	67	Plumber's solder.
	Tin ..	33	
Hard solder ..	Lead ..	33	
	Tin ..	67	
Speculum metal ..	Copper ..	70—65	Takes a high polish. Used formerly in reflectors for telescopes.
	Tin ..	30—35	
Sterro metal (Aich's metal, Delta metal).	Copper ..	60	Strong as mild steel and not easily corroded. Used in hydraulic cylinders sea water valves.
	Zinc ..	38	
	Iron ..	2	
Type metal ..	Lead ..	60—85	
	Antimony ..	8—20	
	Tin ..	5—35	
"Y" metal ..	Aluminium ..	92·5	Used for general casting Retains strength at higher temperature than No. 12.
	Copper ..	2	
	Nickel ..	2	
	Magnesium ..	1·5	
Chromuim metal ..	Chromium less than.	3	Projectiles, files.
Chromium-tungsten steels.	Cobalt ..	0·65—0·75	High speed tools. May be run at 500° — 600° C without losing their edge.
	Tungsten ..	13·5—18·5	
	Chromium ..	3·5—4·5	
	Cobalt ..	0·75—2·0	

Name.	Composition.	Per cent.	Uses.
Caro nium-Vanadium Steel.	Cobalt ..	0·25—1	Gears, springs, general automobile parts.
	Vanadium ..	0·15	
Manganese steel ..	Manganese ..	12—14	Used on sharp railroad curves, frogs, switches, etc., where wear is hard.
Nickelsteel ..	Nickel ..	3—4	Drive shafts, cranks shafts, gears, and other automobile parts.
Nickelchromium steel ..	Nickel	1—4	Armour plate, antomotile parts subject to heavy stress.
	Chromium ..	0·45-2	
Stainless steel ..	Chromium ..	13—20	Used in cutlery, containers for corrosive liquids etc.
Silicon steel ..	Silicon less than	5	Has high permeability and low hysteresis. Used in dynamo construction.
Stellite steel ..	Cobalt ..	30—50	Non-corrodible. Used in cutlery surgical instruments.
	Chromium ...	20—50	

APPENDIX XIV

Statement showing the productive capacity of white metal alloys in the country.

	Name of the manufacturers.	Annual capacity tons.
1.	Eyre Smelting & Refining Co., Kidderpore, Calcutta	25,000
2.	Bombay Metals & Alloys Mfg. Co., Ltd., Bombay	2,500
3.	Indian Smelting & Refining Co., Ltd., Bombay	2,500
4.	Indian Standard Metal Works Ltd., Bombay	2,500
5.	Jaipur Metal Industries Ltd., Jaipur	2,500
6.	Prakash Engineering Works, Agra	500
7.	Binani Metal Works, Calcutta	2,500
8.	Others	2,000
	Total ..	40,000

APPENDIX XV

Statement showing the estimated cost per ton of Black Copper Rods.

Estimated quantity of output per year : 10,000 tons.

Items.	Quantity in tons.	Rate per ton.	Amount per ton.
I. Manufacturing Expenses :—		Rs.	Rs.
1. Raw materials :—			
(a) Electrolytic copper wire bars ..	1·04	1332·0	1385·28
(b) Less scrap (at 90% of metal cost) ..	0·02	1198·8	23·98
	0·02		1361·30
(c) Loss	0·02	..	..
	1·00		1361·30
2. Power and fuel	..	..	13·44
3. Ordinary current repairs and maintenance of buildings, plant and machinery.	..	..	3·35
4. Labour	..	..	3·11
5. General services, supervision and local office charges.	..	..	13·24
6. Expenditure on quality control, research and development.	..	..	..
7. Packing charges	..	..	0·59
8. Miscellaneous, water, lighting, royalties consumable stores etc.	..	..	4·90
		Total ..	1404·93
II. Overhead Charges :—			
9. Depreciation at statutory rates ..	..	..	16·72
10. Interest on working capital ..	..	..	19·04
11. Managing Agents' charges ..	..	..	1·53
12. Directors' and Auditors' charges ..	..	..	0·23
13. Insurance	..	..	0·22
14. Rents, rates, and taxes excluding income-tax and royalties.	..	..	3·11

Items.	Quantity in tons.	Rate per ton.	Amount per ton.
II. Overhead Charges—contd.		Rs.	Rs.
15. Selling expenses		..	1·19
16. Miscellaneous		..	..
		Total ..	42·04
		Gross Total (I) and II) ..	1446·97
Credit for materials recovered, if any (*vide* item 1 (*b*) above).		..	...
		Net Total ..	1446·97
Profit at 10% on fixed capital		..	22·00
Fair selling price		..	1468·97
			or Rs. 1,469

APPENDIX XVI

Summary of recommendations regarding variation in duty in schedule form.

Existing Schedule						Proposed Schedule.				
Item No.	Name of article.	Nature of duty.	Standard rate of duty.	Preferential rate of duty if the article is the produce or manufacture of		Item No.	Name of article.	Nature of duty.	Proposed duty.	Reference in Report to paragraph.
				The United Kingdom.	A British colony.					
64	Copper, wrought and manufacture of copper all sorts not otherwise specified.	Preferential revenue.	36 per cent. *ad valorem*.	24 per cent. *ad valorem*.	.. Free.	64	Copper wrought and manufactures of copper (excluding electrolytic copper rods) but including all sorts not otherwise specified such as sheets, strips, circles, rods, sections, (including arsenical copper rods).	Protection.	35 per cent.	31 (*b*), 32 and 33.
						64 (*a*)	Electrolytic copper rods or black copper rods (in coils).	Protective.	20 per cent.	42 (4).
64 (*1*)	Copper, scrap ..	Revenue.	30 per cent. *ad valorem* (duty abolished since 9th March 1946).	..	.. Free.	64 (1)	Copper scrap ...	...	Free.	43.
						64 (2)	Copper unwrought, ingots, blooms, slabs, cakes, tiles, blocks, bricks, billets, cathodes, blister, bars (electrolytic wire bars) etc.	..	Free	10.

65	German silver including nickel silver.	Revenue.	30 per cent. *ad valorem.*	..	..	Free.	65	Nickel, pellets, cakes, slabs, annodes, shorts, blocks, granules and scraps.	..	Free	14.
							65 (*a*)	All non-ferrous nickel alloys including German silver, nickel silver and cupro nickel unwrought and wrought.	Protective.	30 per cent.	14.
67	Lead wrought the following articles viz., pipes and tubes and sheets other than sheets for tea chests.	Revenue.	30 per cent. *ad valorem.*	..	..	Free.	67	Lead ingots, slabs, cakes blooms, pighead, blocks, bars and scrap.	..	Free	11.
							67 (*a*)	Lead sheets other than sheets for tea chests.	Protective.	20 per cent.	31 (*c*).
							67 (*b*)	Lead wrought—the following articles, viz., pipes, tubes and wires.	Protective.	30 per cent.	33.
67 (*l*)	Lead sheets for tea chests..	Revenue.	30 per cent. *ad valorem.*	..	..	Free.	67 (*l*)	Lead sheets for tea chests ..	Protective.	30 per cent.	..
68	Zinc or spelter, wrought or manufactured not otherwise specified.	Revenue.	30 per cent. *ad valorem.*	..	..	Free.	68	Zinc or spelter, wrought or manufactured not otherwise specified.	Protective.	30 per cent.	..
							68 (*a*)	Zinc sheets ..	Protective.	20 per cent.	31(*c*).
68 (*l*)	Zinc, unwrought including cakes, ingots, tiles (other than boiler tiles, hard or soft slabs and ashes and broken zinc.	..	Free ..	..	..	..	68 (*l*)	Zinc, unwrought including cakes, bars, blocks, ingots, tiles (other than boiler tiles) hard or soft, slabs and plates, dust, dross and ashes, and broken zinc.	..	Free	12.
69	Tin, block ..	Revenue.	Rs. 375 per ton.	..	..	Free.	69	Tin, unwrought in blocks, ingots, bars and slabs, including tin scrap, second grade in unrefined tin, but not including tin alloy scraps.	..	Free	13.

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Existing Schedule.								Proposed Schedule.			
Item No.	Name of article.	Nature of duty.	Standard rate duty.	Preferential rate of duty if the article is the produce or manufacture of			Item No.	Name of article.	Nature of duty.	Proposed duty.	Reference in Report to paragraph.
				The United Kingdom.	A British colony.	Burma.					
70	Brass, bronze and similar alloys, wrought and manufactures thereof not otherwise specified.	Revenue.	30 per cent *ad valorem.*	...	..	Free.	70	Brass, unwrought, ingots, billets, cakes, slabs, blooms excluding scrap. *Note.*—Brass ingot on analysis may be found to contain (1) Copper 74 to 55 per cent. (2) Zinc 26 to 42 per cent, and (3) Components other than copper and zinc including impurities not to exceed 3 per cent of which not more than one-half should be tin.	Protective.	15 per cent.	18 (*a*).
							70 (*a*)	Brass manufactures not otherwise specified such as sheets, circles, strips, rods of wires (excluding tubes and pipes) but including castings such as sanitary and other fittings.	Protective.	35 per cent.	31(*b*) and 33.
							70 (*b*)	Bronze and similar alloys, such as gunmetal and phosphor bronze and manufactures thereof not otherwise specified	Protective.	40 per cent.	19.

						70 (*c*) White metal, tin solders and anti-friction alloys.	Protective.	50%	..	20 and 21.
						70 (*d*) Type metals ..	Protective.	30%	..	22.
						70 (*e*) Mazak or alloys of zinc and aluminium containing not less than 94% zinc.	..	Free	..	23.
						70 (*f*) All non-ferrous metal scrap including alloy scrap, not otherwise specified.	..	Free	..	46.
70 (1) All sorts of metals other than iron and steel, and manufactures thereof not otherwise specified.	Revenue.	30 per cent *ad valorem.*	...	..	Free.	70 (*l*) All non-ferrous virgin metals not otherwise specified.	..	Free	..	46.
						70 (2) All non-ferrous alloys and manufactures of metals and alloys not otherwise specified.	Protective.	30%	..	24.
72 (*e*) Machinery, namely such of the following articles as are not otherwise specified, bare hard drawn electrolytic copper wires and cables, and other electrolytic wires and cables insulated or not, and poles, troughs, conduits and insulators designed as parts of a transmission system and the fittings thereof.	Revenue.	10 per cent *ad valorem.*	...	..	Free.	72 (*e*) Machinery, namely, such of the following articles as are not specified : Paper or cambric insulated cables, and poles, troughs, conduits and insulators designed as parts of a transmission and distribution system and the fittings thereof.	Protective.	10%	..	42 (5).
						72 (*f*) Bare hard-drawn or annealed electrolytic wires and cables of all sizes solid or stranded and A. C. S. R. (alluminium conductor steel reinforced).	Protective.	30%	..	42(5).
73(1) The following electrical instruments, apparatus and appliances, namely :— Electrical control gear and transmission gear.	Preferential Revenue.	36% *ad valorem.*	24% *ad valorem.*	..	12% *ad valorem.*	73 (*l*) The following Electrical instruments. Apparatus and appliances, namely : Electrical Control Gear, transmission namely, switches (excluding switch	Protective.	36 per cent *ad valorem* 24 per cent United Kingdom. 12 per cent Burma.		42 (5).

Existing Schedule.						Proposed Schedule.			
Item No.	Name of article.	Nature of duty.	Standard rate of duty.	Preferential rate of duty if the article is the produce or manufacture of		Item No.	Name of article.	Nature of duty.	Proposed duty.	Reference in Report to paragraph.
				The United Kingdom.	A British colony.					
	Namely, switches (excluding switch boards), fuses and current-breaking devices of all sorts and descriptions, designed for use in circuits of less than ten amperes and at a pressure not exceeding 250 volts; and regulators for use with motors designed to consume less than 187 watts; bare or insulated copper wires and cables, any one core of which, not being one specially designed as a pilot core, has a sectional area of less than one-eighteth part of a square inch, and wires and cables of other metals of not more than equivalent conductivity; and line insulators, including also cleats, connectors, leading in tubes and the like, of types and sizes such as are ordinarily				Burma.		boards), fuses and current-breaking devices of all sorts and descriptions, designed for use in circuits of less than ten amperes and at a pressure not exceeding 250 volts; and regulators for use with motors designed to consume less than 187 watts; insulated copper wires and cables, any one core of which, not being one specially designed as a pilot core, has a sectional area of less than one-eightieth part of a square inch, and wires and cables of other metals of not more than equivalent conductivity; and line insulators, including also cleats, connectors, leading in tubes and the like, of types and sizes such as are ordinarily used in connection with the		

used in connection with the transmission of power for other than industrial purposes, and the fittings thereof but excluding electrical earthenware and porcelain otherwise specified.	transmission of power for other than industrial purposes, and the fittings thereof but excluding electrical earthenware and porcelain otherwise specified.

APPENDIX XVII

Comparative Study of the duties for Non-Ferrous Metals in Australia and the proposed duties in India.

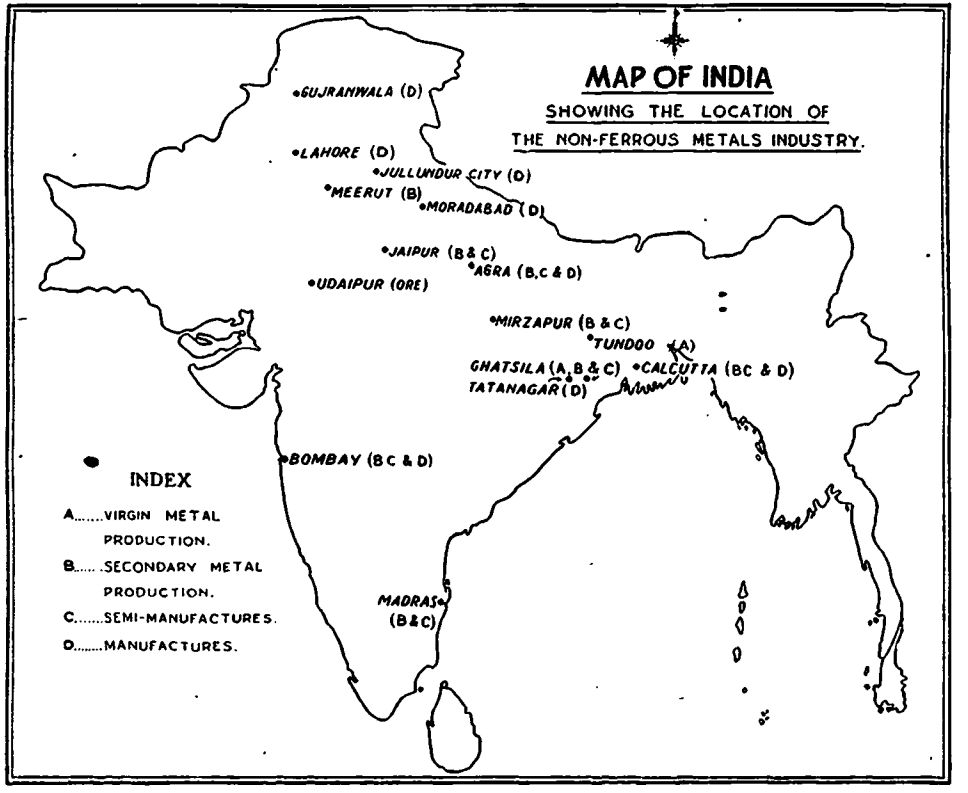
Name of article.	Item No.	Australian Tariff Schedule.			Proposed Indian Tariff Schedule.		Remarks.
		Pref. tariff.	Intermediate tariff.	General tariff.	Item No.	Duty.	
Copper unwrought	140	....	....	10 p. c. + £4 per ton = 14 p. c.	64 (2)	Free.	
Copper wrought and manufactures of copper all sorts not otherwise specified.	140 C	50 p. c.	50 p. c. + 6*d.* per lb.	62½ p. c. + 6*d.* per lb.	64	35 p. c.	
Copper scrap	140 B	....	....	Free	64 (*1*)	Free.	
Electrolytic Copper Rods	140 C	50 p. c.	50 p. c. + 6*d.* per lb.	62½ p. c. + 6*d.* per lb.	64 (*a*)	20 p. c.	Electrolytic copper rods are not separately stated in the Australian schedule.
Arsenical Copper Rods	140 C	50 p. c.	50 p. c. + 6*d.* per lb.	62½ p. c. + 6*d.* per lb.	64	35 p. c.	Arsenical copper rods are not separately stated in the Australian schedule.
Nickel	137 A (*1*)	Free	Free	15 p. c.	65	Free.	
Nickel alloys	139	£3 = 3 p. c.	£3 + 10 p. c. = 13 p. c.	£3-7-6 + 10 p. c. = 13½ p. c.	65 (*a*)	30 p. c.	
Nickel alloys	139 B	22½ p. c.	3½*d.* per lb. + 22½ p. c. = 40 p. c.	3½*d* per lb + + 27½ p c 45 p c	65 (*c*)	30 p. c.	
Lead ingots, slacks, cakes, blooms, bars and pig lead.	Not known.			....	67	Free	

Lead sheets	*141*	*10 p. c.*	....	*20 p. c.*	*67 (a)*	*20 p. c.*
Lead pipes and tubes	*141*	*10 p. c.*	....	*20 p. c.*	*67 (b)*	*35 p. c.*
Lead sheets for tea chests		Not known.		....	67 (1)	30
Zinc unwrought	144 B	30s per ton = 8½ p. c.	30s per ton + 10 p. c. = 18½ p. c.	30s per ton + 10 p. c. = 18½ p. c.	68 (1)	Free.
Zinc wrought	144 B (2)	Free	15 p. c.	15 p. c.	68	30 p. c.
Zinc sheets	144 B (1)	Free	15 p. c.	15 p. c.	68 (a)	20 p. c.
Tin		Not known.		....	69	Free
Brass ingots	139 B	£3 = 5 p. c.	£3 + 10 p. c. = 5 = 10 p. c. = 15 p. c.	£3-7-6 = 5½ p.c. + 10 p. c. = 15½ p. c.	70	15 p. c.
Brass manufactures not otherwise specified such as sheets, circles, rods and sections.	139 B	22½ p. c.	3½*d.* per lb. + 22½ = 22½ + 22½ = 45 p. c.	3½*d.* per lb. + 27½ p. c. = 22½ + 27½ = 50 p. c.	70 (*a*)	35 p. c.
Bronze, gun metal including phospher bronze not otherwise specified.	139 A	£3 = 3 p. c.	£3 + 10 p. c. = 3 + 10 p. c. = 13 p. c.	£3-7-6 + 10 p.c. = 3½ + 10 p. c. = 13½ p. c.	70 (*b*)	40 p. c.
Bronze manufactures	139 B	22½ p. c.	3½*d.* per lb. + 20 p. c. = 20 + 22½ = 42½ p. c.	3½*d.* per lb. + 27½ p. c. = 20 + 27½ p. c. = 47½ p. c.	70 (*b*)	40 p. c.
White metal and anti-friction metals.	138 B	£5 = 4 p. c.	£5 + 17½ p. c. = 4 + 17½ p. c. = 21½ p. c.	£6-5 + 17½ p. c. = 5½ + 17½ p. c. = 22½ p. c.	70 (*a*) (*c*)	50 p. c.
Tin solders	139 D	22½ p. c.	22½ p. c.	27½ p. c.	70 (*c*)	50 p. c.
Mazak or other alloys containing not less than 94 p. c. zinc.	139 A	£3 = 5 p. c.	£3 + 10 p. c. = 5 + 10 p. c. = 15 p. c.	£3-7-6 + 10 p. c. = 5½ + 10 p. c. = 15½ p. c.	70 (*e*)	Free.

Name of article.	Item No.	Australian Tariff Schedule.			Proposed Indian Tariff Schedule.		Remarks.
		Pref. tariff.	Intermediate tariff.	General tariff.	Item No.	Duty.	
Type metal ..	138 B	£ 5 = 7½ per cent.	£5 + 17½ per cent = 7½ + 17½ per cent = 25 per cent.	£5-5 + 17½ per cent = 10 + 17½ per cent = 27½ per cent.	70 (*d*) ..	30.	
All Non-Ferrous metal scrap, including alloy scrap not otherwise specified.	139 C ..	Free ..	15 p. c. ..	15 p. c. ..	70 (*f*) ..	Free.	
All Non-Ferrous virgin metals not otherwise specified.		Not known.	..	....	70 (1) ..	Free.	
Brass work, bronze work, gun metal work for general engineering and plumbing and other trades.	192 ..	30 p. c. ..	50 p. c. ..	57½ p. c. ..	70 (*a*) .. 70 (*b*) ..	35 p. c. 40 p. c.	
Paper or cambric insulated cables and poles, troughs, conduits and insulators designed as parts of a transmission or distribution system and the fittings thereof.	181 B ..	22½ p. c. ..	40 p. c. ..	45 p. c. ..	72 (*e*) ..	10 p. c.	
Bare hard drawn or annealed electrolytic copper wires and cables of all sizes solid or stranded and A.C.S.R.	181 B	..20 p. c. ..	37½ p. c. ..	45 p. c. ..	72 (*f*) ..	30 p. c.	

Note.—Percentage equivalent of Australian currency is approximate.

APPENDIX XVIII



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REPORT

OF THE

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ON THE

STARCH INDUSTRY

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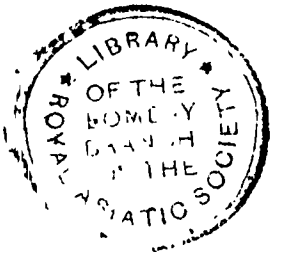

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REPORT ON THE STARCH INDUSTRY

Reference to the Board.

1. Early in 1940 Government had announced that industries promoted by their direct encouragement during wartime might feel assured that, if they were conducted on sound business lines, they would be protected against unfair competition from outside by such measures as Government might devise. In accordance with this decision, starch was one of the industries which was given an assurance of protection under Commerce Department Resolution No. 261-T (2)/45, dated August 20, 1944, which stated that—

> "The Government of India have decided to give an assurance to the starch industry in India that it will, by such means as Government may devise, be protected after the war against unfair competition from abroad provided it is established that the industry is and has been conducted on sound business lines."

Relying on this assurance, Messrs. Sukhjit Starch and Chemicals, Ltd., Phagwara, Kapurthala State, applied to the Government of India for protection on May 27, 1945. The case of the industry was referred to the Board for investigation into its claim for assistance or protection by the Government of India Department of Commerce, in their Resolution No. 218-T (55)/45, dated November 3, 1945.

Terms of reference.

2. The terms of reference to the Board as contained in the above mentioned Resolution are as follows :—

"In the case of each industry the Board will, after such examination as it considers necessary, report whether the industry satisfies the following conditions :—

(1) that it is established and conducted on sound business lines ; and

(2) (*a*) that, having regard to the natural or economic advantages enjoyed by the industry and its actual or probable costs, it is likely within a reasonable time to develop sufficiently to be able to carry on successfully without protection or State assistance ; or

(*b*) that it is an industry to which it is desirable in the national interest to grant protection or assistance and that the probable cost of such protection or assistance to the community is not excessive. Where a claim to protection or assistance is found to be established, i.e., if condition (1) and condition (2) (*a*) or (*b*) are satisfied, the Board will recommend—

(i) whether, at what rate and in respect of what articles, or class or description of articles, a protective duty should be imposed ;

(ii) what additional or alternative measures should be taken to protect or assist the industry ; and

(iii) for what period, not exceeding three years, the tariff or other measures recommended should remain in force.

In making its recommendations the Board will give due weight to the interests of the consumer in the light of the prevailing conditions and also consider how the recommendations affect industries using the articles in respect of which protection is to be granted. Since relief, to be effective, should be afforded without delay, the Board is requested to complete its enquiries with all possible expedition and to submit a report as soon as the investigation of the claim of each industry is concluded ".

Action taken by the Board.

3. On receipt of the case for inquiry from Government, the Board issued a preliminary questionnaire to all the known manufacturers of starch in India, the All-India Starch Manufacturers Association and the Provincial and State Governments requesting them to furnish information regarding the productive capacity and actual production of the factories installed in India, the import of starch from different countries in recent years, the existing import duties on the finished products, etc. In response to this preliminary questionnaire, valuable notes were received from officers of the Central and Provincial Governments which have greatly helped the Board in conducting this inquiry. The preliminary questionnaire, which was principally designed to obtain information regarding the productive capacity and location of the starch and glucose factories in India, was followed up by the issue of a detailed questionnaire purporting to elicit information regarding the import, manufacture, consumption, etc., of starch with a view to ascertaining the measure of protection or assistance required by the industry during the next three years. In addition to the issue of the questionnaires, the Board held several informal discussions with various interests connected with the starch industry. The first discussion took place with Sir John Greaves of Bombay, the then Controller of Mill Stores (Textiles) on the 17th December 1945. The second discussion took place between the Board and Mr. Kasturbhai Lalbhai, President of the All-India Starch Manufacturers' Association on the 15th January 1946, when the Board visited the Anil Starch Factory at Ahmedabad. The third discussion arose out of an enquiry by Government as to whether, in view of the reported imports of starch from abroad at prices below the controlled prices fixed by Government, any interim action was necessary pending the full enquiry by the Board. These informal discussions took place in Bombay on the 7th and 14th September 1946 and a list of the persons who attended these discussions is given in Appendix I. It was revealed in this inquiry that the imports of starch were on a very limited scale and at prices well above the control prices. After considering the relevant data it was decided that there was no urgency in the matter which could therefore stand over till full examination by the Board.

Visits to Factories.

4. The members of the Board paid visits to starch factories as follows :—

1.	Anil Starch Products, Ltd. ..	.. All members of the Board.	.. January 15, 1946.
2.	Sukhjit Starch & Chemicals, Ltd., Phagwara.	Dr. Nazir Ahmad	.. October 15, 1946.
3.	Renderian Rubber & Chemical Works, Delhi.	Dr. Nazir Ahmad	.. October 20, 1946.
4.	Rampur Maize Products, Ltd.	.. Dr. Nazir Ahmad	.. October 22, 1946.

Dr. Kelkar, Technical Adviser to the Board, visited the Anil Starch Products Ltd., Ahmedabad, on October 7, 1946. The Cost Accounts Officer deputed by the Board made a detailed examination of the cost of manufacture of starch in the following factories :—

1.	Anil Starch Works, Ahmedabad	October 7th and 8th 1946, November 14, 1946.
2.	Sukhjit Starch Factory, Phagwara	October 14 and 15, 1946.
3.	Rampur Maize Products	October 16 and 17, 1946.

Public Inquiry.

5. The public inquiry into starch and glucose was held in Bombay on November 7 and 21, 1946. The list of persons representing the manufacturing, consuming and importing interests of starch who attended this inquiry is given in Appendix II.

History of the Industry.

6. The starch industry in India was planned to be established before the war and several industrialists had begun the work of prospecting, experimenting and consulting experts since 1936. The Bharat Starch & Chemicals, Ltd., Abdullapur and the India Starch Products, Ltd., Kalol, started working their factor es in 1938, but these factories found it very difficult to operate successfully in the face of strong competition from imports. The Anil Starch, Ahmedabad, came into existence in 1941, while the Rampur Maize Factory was established in 1942. A complete list of the starch factories as known to us has been compiled, and will be found in appendix III. The war naturally created favourable conditions and the starch industry in its present form came into existence. The total prohibition of import of starch in the year 1942 gave a strong fillip to the industry, and as many as forty-five factories sprang up in different parts of the country. Most of them, however, could only function for a short period, while others experienced difficulties and suffered forced stoppages due to the shortage of the essential raw materials like maize and wheat. As a result, none of the factories has been able to produce starch up to its installed capacity. Owing to the acute famine conditions which prevailed in 1943 and which have more or less continued since then, the Government of India issued the Starch Control Order on the 15th May 1943, (*a*) prohibiting the production of starch from wheat and (*b*) fixing the prices of starch. This was later amended on the 26th February 1944, and the production and the price of starch from maize was also brought under control. As a result of these measures, most of the factories have had to close down, and it is stated that, at the present time, hardly any factory is working, except spasmodically, for want of essential raw materials. This state of affairs must continue until the food position becomes easier and Government is able to allocate adequate quantities of maize to the factories.

Process of manufacture.

7. On receipt at the factory, the maize is cleaned and stored, the storage being either in bags or in silos. If the maize is stored for any length of time, it should be taken out periodically and aired to prevent deterioration. The clean maize delivered to vats where it is steeped in tepid water containing sulphur dioxide. After the maize is properly steeped, the vat is drained and the steeped maize is

conveyed to coarse grinders in which it is crushed in such a manner that the germ, which contains the oil, is loosened out. The kibbled corn from the mills is washed into tanks called degerminators. The germs, being lighter, float up to the top, and are skimmed off. The degerminated maize pulp is pumped from these tanks and ground fine. The crude milk coming from the last stage grinders is pumped into tanks where it is treated with sulphur dioxide. It is then diluted and sieved on silk gauze to separate the fibre or husk which is washed free of starch. The starch milk coming from these sieves flows on to the tables where starch settles down while gluten flows over. The sediment of starch is flushed with the aid of starch milk obtained in the previous process. It is submitted to another refining process, centrifuged and dried. This is known as pearl starch. It is either packed as such or sifted for the production of the powder variety.

Uses.

8. Starch finds numerous uses for industrial and household purposes. It is used in very large quantities by the textile industry for sizing yarn and for finishing cloth, by the paper and jute industries for giving required finishes to their products, and in the manufacture of cosmetics, soaps and pharmaceuticals. It is required in fairly large quantities in making confectionery and baking powders and in the brewing industry. It is also converted into dextrine and glucose which find many industrial uses. In India by far the largest consumer of starch is the cotton textile industry, while the paper and jute industries also use appreciable quantities. It is estimated that the consumption of starch in these industries in India is approximately 90·4 and 6 per cent. respectively of the total. The use of starch for edible purposes is at present rather limited in India but it is likely to increase when the industries for making new food preparations come into existence.

Imports.

9. Until the outbreak of the war, practically all the starch requirements of the country were met from imports. Detailed statistics relating to imports will be found in Appendices IV and V. It may be briefly stated here that the imports of all starch materials for 5 years ending March 1939 together with their values were as follows :—

Quantity in tons

	1934-35	1935-36	1936-37	1937-38	1938-39
Starch (maize)	11,522	11,415	12,584	17,154	16,129
Sago flour	12,646	15,397	15,614	19,065	16,871
Farina	4,468	4,513	4,337	4,401	4,172
Dextrine	1,678	1,545	1,474	1,467	1,080
Total ..	30,314	32,870	34,009	42,087	38,252

Value in Rupees.

	1934-35	1935-36	1936-37	1937-38	1938-39
Starch (maize) ..	17,99,605	17,35,501	18,83,494	28,03,081	28,87,696
Sago flour ..	10,72,372	14,09,149	15,90,476	20,72,893	15,04,482
Farina ..	6,61,785	6,73,077	6,57,401	7,67,832	6,89,179
Dextrine ..	3,05,956	2,94,879	2,87,691	2,99,612	2,22,176
Total ..	38,39,781	41,12,606	24,19,062	59,43,418	53,03,533

A reference to Appendix IV will show that the principal countries from which starch was imported were the Netherlands, Germany, Belgium and the United States of America. Appendix V shows imports as well as their break up under sago, maize starch, etc.

Estimated Indian demand.

10. The import figures give a fairly good indication of the total consumption of starches of different kinds except wheat flour before the war, as there was very little production of these materials during these years in the country. It will be seen that in 1937-38 and 1938-39, the total imports amounted to about 40,000 tons per annum. In addition, a certain quantity of wheat flour was used by the mills but it has been difficult to ascertain this quantity with any degree of exactness. According to one estimate placed before the Board, the total consumption of starchy materials of all kinds including wheat flour immediately before the war amounted to about 80,000 tons which means that nearly 40,000 tons of wheat flour were used by the Indian mills in addition to the imported starches. This estimate, however, was contested by others present at the inquiry who maintained that the consumption of wheat flour did not exceed 10 per cent. of the total consumption of starch. During the war the production of cloth in Indian mills showed an increase, and, therefore, in the normal course of events the consumption of starch by the mills would have increased proportionately. The increased demand for starch, however, was checked to a considerable extent by the Size Control Order which restricted the percentage of size to be used by the mills. If this Order remains in force, it is estimated that the demand by the Indian Cotton mills in the next three years will not exceed 45,000 tons per annum. In such an event, the total demand of starch in India during the next three years is estimated to be 50,000 tons per annum, made up as follows :—

	Tons
Textile Mills (90%)	45,000
Paper Mills (4%)	2,000
Jute Mills (6%)	3,000
Total ..	50,000

If, however, the Size Control order is removed or there is a very considerable expansion in the principal starch consuming industries such as textiles, paper, food preparations, etc., it is likely that the consumption of starches of different kinds excluding wheat may increase up to 75,000 or 80,000 tons per annum.

11. It would be interesting to compare the production and consumption of starch in India with that in a highly developed country like the United States of America. It is reported that in the United States of America over a hundred million bushels of corn are converted each year into a million and a half tons of starch. The textile industry alone consumes over 110,000 tons of starch, while the paper industry takes another 89,000 tons. The quantity of starch used for edible purposes is about 110,000 tons per annum, while 40,000 tons per annum are converted into dextrine. Similarly, huge quantities of starch are used in other industries such as cosmetic, explosives, pharmaceuticals, confectionery, laundry, soaps, asbestos, etc., while the balance left over after meeting the domestic requirements provides a valuable export material.

Domestic production.

12. As mentioned earlier there was very little production of starches of any kind in India before the war. The few factories which existed at the time found it extremely difficult to compete with foreign imports. During the war when the foreign supplies were curtailed, several factories sprang up for the manufacture of starch from different starch-bearing materials, especially maize and wheat. Many of these factories were established on a small scale with improvised machinery, but some of them were able to get up-to-date plant and were established on a fairly large scale. The figures for the Indian production of starch during the last 3 years as supplied by the Textile Commissioner are as follows :—

1943	16,973	tons.
1944	24,164	,,
1945	26,298	,,

During these years the difference between the output of Indian starch factories and the total consumption of starch in India was made up by the indigenous production of tapioca starch which rose to about 18,000 tons in 1943 and is still manufactured on a cottage industry scale. Since 1945, the production of the Indian starch factories has shown a sharp fall owing to the scarcity of essential raw materials and the deficit had to be made up partly by imports of maize starch and sago from abroad and partly by tapioca starch. So far as could be ascertained there are at present 41 starch factories of different sizes in India out of which 24 are licensed while the remaining 17 are unlicensed. According to the Textile Commissioner the rated capacity of the 24 licensed factories is 58,000 tons per annum. It is difficult to estimate the capacity of the unlicensed factories as no reliable statistics were available in respect of them, but even if it is assumed that the capacity of the unlicensed factories is about 15,000 tons per annum, it would be seen that the total installed capacity for manufacturing starch from corn in India is 73,000 tons per annum. Thus the installed capacity in the country is more than enough to meet the probable requirements during the next three years, which have been estimated at 50,000 tons per annum. It should, however, be remembered in this connection that the total estimated demand of 50,000 or 75,000 tons per annum

includes starches of all kinds including farina, sago and dextrine, which are used in varying quantities by the different mills according to their inclinations and requirements, and if sufficient supplies of these starches are also available in the next few years, the total demand for maize starch would be well within the productive capacity of the Indian starch factories.

Raw materials.

13. The most suitable raw material for the production of starch in India is maize, although during the war, other raw materials such as wheat, bajra and jowar were also tried. In addition, a certain amount of tapioca starch is also produced from tapioca roots, which are found in abundance in the South, especially in Travancore. Assuming that the entire production of 50,000 tons per annum of starch is made from maize, it would require approximately 100,000 tons of maize per annum. The acreage devoted to production of maize and the yield of maize in different provinces and States of India from 1936 to 1941 is given in Appendix VI. It would be seen from this Appendix that the total yield of maize grown over an area of approximately 6½ million acres is just over 2 million tons, giving an average yield of about 0·284 tons or 5·68 cwt. per acre. Thus, the annual requirements of the starch factories amount to 5 per cent. of the total maize production in India. This cannot be regarded as a heavy drain on one of the food crops of India, and in normal times there should be no serious difficulty in sparing this quantity of maize for an industry like starch which is an essential material for the textile industry. It would be interesting in this connection to compare the figures regarding the production, consumption, etc., of maize in India and U. S. A. In the latter country, nearly 76 million tons of maize were raised on an area of over 94 million acres in 1943, giving a yield of 0·803 tons or 16·06 cwts. per acre. The demands of the starch factories required over 2½ million tons representing 3·3 per cent. of the total crop. It would thus be seen that the yield of maize per acre in U. S. A. is nearly three times that in India. In view of the importance of this crop both for food and for industrial purposes, we recommend that the Provincial and State Governments should take early steps to develop and propagate better varieties of maize which should give higher yields per acre. Apart from maize, the other raw materials required for the manufacture of starch are sulphur and some chemicals. These are, however, required in small quantities and are either obtainable in India or can easily be met from imports.

Starch substitutes from non-edible materials.

14. Owing to the acute food position prevailing in the country, a search has been made for non-edible products which may be used as substitutes for starch. Experiments carried out at the Forest Research Institute, Dehra Dun, showed that the pectinous matter contained in tamarind seed has sizing and finishing properties somewhat similar to starch. Owing to the limited quantities of maize and other kinds of starch being available, fairly large quantities of tamarind seed powder have been used by the cotton and jute mills during the last 2 years. Their reports, however, show that this powder was not prepared in a proper manner and did not give entirely satisfactory results. The jute mills were, on the whole, better satisfied than the cotton mills which may partly be due to the fact that the tamarind seed powder leaves a yellowish brown tint on the sized yarn or cloth. Even if this powder is made according to the specifications as laid down by the Forest Research Institute, Dehra Dun, it is not possible to say at present how far it will replace starch, especially in the cotton mills. Experience of certain mills,

however, indicates that tamarind seed powder, properly prepared, can be used by itself or in combination with starches for sizing and finishing processes. A great deal of research work remains to be done before the true position regarding the use of tamarind seed as a sizing agent can be ascertained. The chemical composition of the product has to be worked out as well as methods for modifying or altering its properties. The detailed method for preparing the powder on a factory scale in which the by-products are also utilised has yet got to be fully worked out, after which mill tests should be carried out on the powder so prepared. We recommend that research and developmental work on these lines should be carried out to ascertain the potentialities of this material which is available in large quantities, especially in South India.

Quality of the Indigenous product.

15. It has been stated earlier that some of the starch factories are equipped with up-to-date plants while the others have only improvised machinery. It is only natural that the quality of starch produced in the former factories should be much superior to that in the latter factories. From the evidence placed before the Board, it was clear that the quality of starch produced in the Indian factories equipped with up-to-date plants was in no way inferior to that of the imported materials. It may also be assumed that once the maize supply position becomes easier, and the factories start working again, the force of competition and the need for survival will compel the less efficient factories to improve their quality either by installing new machinery or by adopting better process of manufacture and to bring it up to the mark.

Desirability of allotting maize to starch factory.

16. Most of the starch factories have been shut down wholly or partially for some time past because all the available maize is required for food. While it is incontestable that food requirements should take priority over others, a view to which the industry also subscribes, it would not be desirable to allow this industry to die for want of essential raw materials. It served an extremely useful purpose during the war in helping the textile industry to manufacture garments for the fighting forces. A large amount of capital has been invested in it and it can provide employment for a fairly large number of people. We are, therefore, definitely of the opinion that the Government should find ways and means to allot about 50,000 tons of maize to this industry to enable the factories to work at least up to half of their productive capacity until such time as the food position becomes easy and the factories are able to obtain their full requirements of maize. The supply of even limited quantities of maize as indicated above should enable the factories to keep their technical staff and labour together and prevent the machinery from getting rusty from want of use. There is another important consideration in favour of allotments of maize to these factories. Two of the by-products in the manufacture of starch are cattle feed and fertilizers which will help in increasing the milk supply and food production in the country.

Board's estimate of cost of production.

17. As stated in paragraph 4 of our report, the Cost Accounts Officer deputed by the Board examined in detail the cost of production of starch in three factories, viz., Anil Starch Products, Ahmedabad, Rampur Maize Products, Rampur, and Sukhjit Starch & Chemicals Phagwara (Punjab). The cost data prepared by him were scrutinised by the Board. The cost of manufacture

differed some what from factory to factory, depending upon the efficiency of the plant and process, cost of raw material, fuel, electricity, labour charges, etc. In order to work out a representative cost sheet which would be applicable to the industry as a whole, the Board decided to take the average of the cost of manufacture in the three factories with certain minor adjustments in individual items as giving a fair cross-section for the industry. These adjustments were made as a result of the discussion at the public inquiry. The cost of manufacture of starch in India worked out in this way for the next three years is shown in the table below. It should be mentioned in this connection that this table is based upon a production of 4,500 tons of starch per annum, which is approximately half the productive capacity of the bigger factories, and it is therefore assumed that sufficient maize will be made available to each factory, enabling it to work up to half its installed capacity during the period of food shortage. The larger Indian factories such as Anil Products, Rampur Maize Products, etc., are capable of producing nearly double this quantity of starch provided maize is made available to them. If, during this period, the maize position becomes easy and the factories are able to get their full requirements, their production can be stepped up and the costs of manufacture would automatically come down.

Board's estimate of cost of manufacture of starch in 1947-48-49 in a factory of average efficiency with an average annual output of 4,500 tons of starch.

Item of cost	Cost per ton in rupees	Remarks
1. Materials :—		
1·852 tons of maize at Rs. 220* per ton.	407	*Yield of 54% maize Rs. 190 at market rate. Freight, transport, and handling. Rs. 30 Rs. 220 per ton.
2. Power and fuel :—		
Electricity ..	14	
Coal and other fuel ..	17	This cost would be less were the coal position sufficiently favourable to enable firms to dispense with the necessity of using such fuels as firewood molasses, etc.
3. Labour ..	60	
4. Repairs and maintenance ..	30	
5. Consumable stores ..	50	
6. Establishment ..	20	
7. Depreciation at statutory rates.	25	
8. Other overheads ..	25	

Item of cost		Cost per ton in rupees	Remarks
9. Packing charges	..	22	
10. Selling expenses	..	20	
11. Interest	..	9	4% on working capital (Rs. 10 lakhs).
		699	
Credit for by products	..	50	
Net cost of manufacture	..	649	
		or Rs. 32·45 per cwt.	

(2) A few remarks are necessary to explain the above table.

(*a*) *Raw Materials.*—The yield of starch has been assumed at 54 per cent. of the weight of maize. The price of maize has been taken at Rs. 190 per ton at the market which is very nearly equal to the prevailing price, while an allowance of Rs. 30 per ton is given for freight, transport and handling charges from the market to the factory. We were informed that the three large markets for maize are (1) Lakhimpur in U. P., (2) Jagraon in the Punjab and (3) Deoghar (Monghyr Dt.) in Bihar. Since we have decided to link up the cost of manufacture of starch with the price of maize, we recommend that if there are wide fluctuations in the price assumed by us, viz., Rs. 190 per ton during the period of protection, the average ruling price of maize in these three markets should be ascertained and an adjustment should be made in the cost of manufacture of starch in a manner which will be explained presently under the head " Fair selling price ".

(*b*) *Power and Fuel.*—Owing to the shortage of coal, many factories in the past were compelled to use other forms of fuel such as firewood, molasses, etc., which are more expensive than coal. If in the next three years, the position regarding the supply of coal to starch factories improves, some reduction should be possible under this head.

(*c*) *Other items.*—So long as the factories work up to only a fraction of their full installed capacity, large reductions in these items are not possible. If, however, the maize position becomes easier and the factories are able to work up to full capacity, some reduction in the incidence of expenditure on these items per ton of manufacture would be possible.

(*d*) *Interest on working capital.*—We have allowed interest at the rate of 4 per cent. on working capital of Rs. 10 lakhs which is based on the average obtained from the published accounts of the three manufacturers and has been related to the total tonnage after considering the reduced output owing to non-availability of maize. It is very nearly equal to the value of the output of 4 months.

(e) *Credit for by-products.*—We have allowed a credit of Rs. 50 for by-products per ton of starch produced. This is based upon the actual receipts of two of the three factories. These by-products such as maize oil, cattle feed, etc., form important and useful by-products, and in America they fetch very good prices. In India, however, people are just beginning to appreciate their value, and it is likely that in future they may fetch higher prices.

Fair selling price.

18. It will be seen from the table in paragraph 17 that the cost of manufacture, excluding profit, of starch produced in an Indian factory of average efficiency comes to Rs. 649 per ton. In order to determine the fair selling price we must add profit based on fixed capital to the cost of production. We have allowed profit at the usual rate of 10 per cent. on fixed capital of Rs. 12 lakhs which on the basis of the output assumed by us, works out at approximately Rs. 27 per ton, making the fair selling price of Rs. 676 per ton or Rs. 33·8 per cwt. As it is unlikely that most of the factories will be working to even half capacity for the best part of the protection period, we have decided to give a little extra margin to the industry and to fix the fair selling price at Rs. 35 per cwt. This fair selling price is based on the assumption that during the period in which the protection recommended by us is in force, the price of maize will remain in the neighbourhood of Rs. 190 per ton. As it takes approximately two tons of maize to manufacture one ton of starch, the price of maize is a very substantial factor in determining the cost of production of starch. If during this period the price of maize goes appreciably above Rs. 190 per ton, it is clear that the starch factories cannot be expected to manufacture and sell starch at Rs. 35 per cwt. We, therefore, recommend that if the average price of maize in the above mentioned markets exceeds Rs. 190 per ton, this factor should be taken into consideration in determining the fair selling price of starch for the scheme of protection. Since it is equally important to protect the interests of the consuming industries, we further recommend that if the price of maize goes below Rs. 190 per ton during the period of protection, a corresponding reduction in the fair selling price of starch should be made. The representatives of the starch industry present at the oral inquiry agreed to this proposal.

Existing rate of duty.

19. The following extract from the first Schedule of the Indian Customs Tariff (26th issue) gives the rates of duty applicable to starches :—

Item No.	Name of Article	Nature of Duty	Std. rate of duty	Preferential rate if the article is the produce or manufacture of		
				The U. K.	A British Colony	Burma
11 (2) ..	Sago Flour ..	....	Free	..	..	..
11 (3) ..	Sago, Tapioca and Tapioca Flour.	Preferential Revenue.	36% *ad valorem.*	..	24% *ad valorem.*	12% *ad valorem.*
11 (4) ..	Starch and Farina ..	Revenue ..	18% *ad valorem.*	..	..	Free.

The bulk of imports of starch falls under item 11 (4) and thus the prevailing duty at present is 18 per cent. *ad valorem*, sago flour being free of customs duty.

C.I.F. Price and landed cost.

20. There have been very small imports of starch recently and it was not, therefore, possible to obtain any detailed information regarding the landed cost. According to the information given by a representative of Corn Products, Bombay, in the course of the oral examination on the 27th September 1946, the latest consignment of Canadian starch was landed at Rs. 47 per cwt. inclusive of the duty at 18 per cent. The details of the landed cost are as follows :—

	Per cwt.
	Rs. a. p.
C.I.F. Price $11·48 or	38 3 8
Customs duty at 18 per cent.	6 14 1
Landing and clearing charges	1 14 1
	46 15 10

Inclusive of profit and delivery charges, the present selling price of Pearl starch by Corn Products, f.o.r. Bombay is Rs. 50 per cwt. Further, the Textile Commissioner informed the Board that small consignments of starch were recently received at a landed cost varying from Rs. 38 per cwt. to Rs. 49-4-0 per cwt. We were also told that some starch was imported from Argentine at a landed cost of about Rs. 60 per cwt. The real position is that it is not possible to ascertain with any degree of certainty what the landed cost of imported starch is likely to be. The representative of Corn Products said that there were no chances of any imports coming during the next three months and that the earliest imports from U. S. A. might be expected only after January 1947. He was unable to indicate what the landed cost of the future imports would be, though it was not expected to go below Rs. 35 per cwt. It should be noted that though some figures relating to the landed cost of Canadian, Argentine, and Australian starches have been given, the real competition in future should be expected from U. S. A. which is one of the main producers of starch.

Measure of protection.

21. The present controlled prices of starch are Rs. 45 per cwt. of thin boiling starch, Rs. 38 per cwt. for powdered and Rs. 35 per cwt. for pearl starch. We have taken the fair selling price of pearl starch for the Indian factories at Rs. 35 per cwt. on the basis of maize price of Rs. 190 per ton at the market. At the current c.i.f. prices, the existing revenue duty of 18 per cent. *ad valorem* gives adequate protection to the industry. Since, however, it is possible that these import prices may go down in future and since the industry is, in our opinion, qualified for protection, we recommend that the present revenue duty of 18 per cent. should be converted into a protective *ad valorem* duty at the same rate. If, however, the landed cost of pearl starch imported from any country falls below Rs. 35 per cwt. section 4 (I) of the Tariff Act should be applied and the duty should be so adjusted as to raise the

landed cost of imported pearl starch to Rs. 35 per cwt. As regards the period of protection, the industry represented that there was shortage of maize at present, and, therefore, it should be allowed protection for at least three years so that in 1948 or 1949, the factories might be in a position to work for at least one full year up to their rated capacity before they approach Government again for a review. We accept this view and recommend that the protection should be for the period ending 31st March 1950. In this scheme of protection we have naturally assumed that the price difference between the different types of starches such as pearl starch, powder starch and thin boiling starch will be maintained in regard to future imports. If, however, there is a tendency to circumvent the protection by importing superior varieties of starch below Rs. 35, a new situation will have arisen calling for a re-examination of the case.

Competition from Sago flour.

22. It was mentioned in the course of the oral evidence that large quantities of sago flour are being imported from Singapore and that they are likely to replace starch in the Indian mills and offer severe competition to it even if maize starch is available. From the information received from the Collector of Customs, Bombay, it is clear that there have been heavy imports from June to November 1946. The average c.i.f. price of the sago flour imported during these months comes to about Rs. 40 per cwt. though in previous periods the price went up to as much as Rs. 50 per cwt. From the information given to us, it is evident that the price of sago flour fluctuates violently. We have been told that the latest c.i.f. price of sago flour pink is Rs. 25-8-0 per cwt. and of sago flour white lingga Rs. 33 per cwt. There was a great deal of difference of opinion amongst the witnesses as to the competitive capacity of the pink and white sago flour in relation to maize starch. While the representatives of the industry urged that what really competes with maize starch is pink sago flour, it was contended by other witnesses that this is not so and that the price of the white variety alone should be taken into consideration in determining the competitive capacity of sago flour. The fact, however, is clear that there must be a certain price difference between starch and sago flour. In the pre-war years, the difference between the price of the imported starch and sago flour has varied from 50 to 100 per cent. In the written memorandum the representatives of the starch industry had asked for a price difference of Rs. 10 per cwt. between starch and sago flour. In the course of the oral evidence, however, they wanted that the difference should be only Rs. 5 which should apply in the case of the pink sago flour. Though we realise that sago flour can be a serious competitor to starch if the price difference between the two is considerable we think that a price difference of Rs. 10 between pink sago flour and maize starch and a price difference of Rs. 5 between white sago flour and maize starch may be considered as an adequate margin necessary to eliminate any danger of competition. We, therefore, recommend that, if the price of the imported pink sago flour goes below Rs. 25 or that of white sago flour goes below Rs. 30 per cwt. a duty should be imposed so that the landed cost of either variety is not less than what is indicated above. The rate of duty on both the varieties should be the same.

Burden of protection.

23. It has been stated that 90 per cent. of the starch used in the country is consumed by the textile industry. The data supplied by mill managers show that on the basis of price of pearl starch at Rs. 35 per cwt. the cost of sizing one yard of cloth varies from ·75 to 1·5 pies in different mills and for different qualities of cloth.

This is an extremely small charge in relation to the cost of cloth, and in any case, since we have not recommended any increase in the existing duty on starch the question of any additional burden on any of the consuming industries does not arise.

Eligibility for protection.

24. This industry largely came into existence during the war as a result of the assurance of protection given by government. When foreign imports of starch were not available, it served an extremely useful purpose in supplying the textile industry with one of its essential raw materials. Although most of the starch factories are at present shut down for want of raw materials, yet members of the Board had occasion to visit some which are equipped with uptodate plant. Their account books examined by the Cost Accounts Officer deputed by the Board also show that when the raw materials were available, the industry was being run on sound business lines. The Board is, therefore, satisfied that this industry fulfils the first condition prescribed for eligibility for protection. As regards the second condition, the most important raw material is maize which is grown to the extent of over two million tons per annum in India and in normal times should be available for this industry. India is also one of the largest manufacturers of cotton and jute fabrics and has, therefore, the market for the consumption of starch. The installed capacity in the country is adequate for its needs in the immediate future, and allowing for the differences in the price of raw materials, the cost of production in Indian factories is not unduly high. The quality of starch has been recognised by the consuming industries to be on the whole as good as that of the imported product. In view of all these reasons, the Board is satisfied that the industry also fulfils condition 2 (as prescribed in the terms of reference) and is, therefore, eligible for protection.

Conclusions and recommendations.

25. Our conclusions and recommendations are summarised as under :—

(1) The total demand for starch in India during the next three years is estimated at 50,000 tons per annum, if the Size Control Order remains in force during that period. The consumption of starch is likely to go up to 75,000 or 80,000 tons per annum, if the Size Control Order is removed, or if there is a considerable expansion of the textile industry. (Paragraph 10).

(2) The rated capacity of the 24 licensed factories is stated to be 58,000 tons per annum. The maximum production so far achieved was 26,298 tons in 1945. (Paragraph 12).

(3) Maize is the principal raw material used in the manufacture of starch. To manufacture 50,000 tons of starch, approximately 100,000 tons of maize are required. The present area under maize cultivation is nearly 6½ million acres and the yield is estimated at a little over 2 million tons. In view of the importance of this crop both for food and for industrial purposes, we recommend that the Provincial and State governments should take early steps to develop and propagate better varieties of maize which should give higher yields per acre. (Paragraph 13).

(4) Owing to the acute food position prevailing in the country, it is suggested that research and developmental work on non-edible products like tamarind seed should be carried out to ascertain the potentialities of these materials which are available in fairly large quantities for use as a sizing agent (Paragraph 14).

(5) The quality of starch produced in the Indian factories equipped with uptodate plants is in no way inferior to that of the imported material. (Paragraph 15).

(6) While it is incontestable that food requirements should take priority over others, it would not be desirable to allow this industry to die for want of essential raw materials. We are, therefore, of the opinion that Government should find ways and means to allot about 50,000 tons of maize to this industry to enable the factories to work at least half of their full productive capacity until such time as the food position becomes easy and the factories are able to obtain their full requirements of maize. (Paragraph 16).

(7) The cost of manufacture has been arrived at on the basis of factories working 50 per cent of their capacity in view of the short supply position of maize which is likely to remain for some time. If the factories work up to their full capacity and do not suffer from the present handicaps of short supply of coal, etc., the manufacturing costs are likely to come down, and this process will be further helped by the better utilisation than at present of waste and by-products. (Paragraph 17).

(8) We have arrived at a fair selling price of Rs. 35 per cwt. or Rs. 700 per ton for starch. This fair selling price is based on the assumption that during the period of protection recommended by us the price of maize will remain in the neighbourhood of Rs. 190 per ton. If, during the period of protection, the price of maize in the principal markets rises above Rs. 190 per ton, this factor should be taken into consideration in determining the fair selling price of starch. Similarly, if the price of maize in the markets goes down below Rs. 190 per ton during this period, the fair selling price of starch should be reduced proportionately. (Paragraph 18).

(9) The representatives of importers were unable to indicate the landed cost of future imports, but expected that it would be above Rs. 35 per cwt. (Paragraph 20).

(10) At the current landed costs, the existing revenue duty of 18 per cent. *ad valorem* gives adequate protection to the industry. Since, however, it is possible that these import prices may go down in the near future and since the industry has, in our opinion, qualified for protection, we recommend that the present revenue duty of 18 per cent. should be converted into a protective *ad valorem* duty at the same rate and should remain in force up to 31st March 1950. We also recommend that subject to the provisions of paragraph 18 of the report, if during the protection period the landed cost of imported pearl starch falls below Rs. 35 per cwt. section 4 (1) of the Tariff Act should be applied and the duty should be adjusted so as to raise the landed cost of imported pearl starch to Rs. 35 per cwt. (Paragraph 21).

(11) We recommend that, if the price of imported pink sago flour goes below Rs. 25 per cwt. or that of white lingga goes below Rs. 30 per cwt. a duty should be imposed so that the landed cost is not less than Rs. 25 in the case of pink or Rs. 30 in the case of the white variety. The duty should be the same in respect of both varieties. (Paragraph 22).

(12) We are satisfied that the industry has fulfilled the conditions laid down as being necessary for protection. (Paragraph 24).

26. The Board wishes to thank Dr. J. N. Ray of the Directorate General of Industries and Supplies and Dr. Sri Krishna of the Forest Research Institute for the valuable help given by them in this inquiry. The Board's thanks are also due to Mr. V. H. Mumford, Cost Accounts Officer, Dr. V. V. Kelkar, the Board's Technical Adviser and Rai Sahib S. C. Aggarwal, Deputy Secretary and Dr. Rama Varma, Assistant Secretary of the Board for the help and assistance rendered by them in the course of this inquiry.

Acknowledgments.

(Signed) SHANMUKHAM CHETTY—PRESIDENT.

(Signed) C. C. DESAI—MEMBER-SECRETARY.

(Signed) NAZIR AHMAD—MEMBER.

(Signed) H. L. DEY—MEMBER.

(Signed) S. C. AGGARWAL—DEPUTY-SECRETARY.

Bombay, 16th January 1947.

APPENDIX I

List of the persons who attended the informal discussion on the 7th and 14th September 1946

7th September 1946 :—

(1) Mr. Dharam Vira, O.B.E., I.C.S., Textile Commissioner, Government of India.

(2) Mr. T. P. Barat, Joint Textile Commissioner, Government of India.

(3) Mr. Neville N. Wadia, Bombay Dyeing and Mfg. Co., Ltd., Bombay.

(4) Sir Frederick Stones, E. D. Sassoon Mills, Bombay.

(5) Mr. E. J. Guetta, Managing Director, Corn Products Co. (India), Ltd., Bombay.

(6) Mr. Frank T. Salzer, Corn Products Co. (India), Ltd., Bombay.

14th September 1946 :—

(1) Mr. M. Dutt
(2) Mr. N. P. Hutheesing
(3) Mr. Vadilal Lallubhai

} Representing the Starch Manufacturers.

APPENDIX II

List of persons who attended the oral evidence on 7th and 21st November 1946

7th November 1946 :—

Producers :—

1. Anil Starch Products Ltd., Ahmedabad, and Indian Starch Manufacturers' Association, represented by Mr. Kasturbhai Lalbhai.

2. Rampur Maize Products Ltd., Rampur, represented by Dr. Van Gelder.

3. Gwalior Maize Products, Mandsaur, represented by Mr. M. R. Nadkarni.

4. Sukhjit Starch Chemicals, Ltd., Phagwara, represented by Mr. B. K. Sardana.

Consumers :—

1. Binny & Co., Madras, represented by Mr. A. E. Jones.

2. W. T. Suren & Co., Bombay, represented by Mr. W. T. Suren.

Importers :—

1. Corn Products (India), Ltd., Bombay, represented by Mr. Salzer.

2. Sizing Materials Co., Ltd., Bombay, represented by Mr. Marginson.

Officials and others :—

1. Textile Commissioner, Bombay, represented by Mr. S. W. Shiweshwarkar, O.B.E., I.C.S., Mr. H. D. Doongaji.

2. Food Department, Government of India, New Delhi, represented by Mr. Piplani.

3. Industries and Supplies Department, New Delhi, represented by Dr. J. N. Ray.

4. Forest Research Institute, Dehra Dun, represented by Dr. Shri Krishna.

21st November 1946 :—

Producers :—

1. Anil Starch Products, Ltd., Ahmedabad, and Indian Starch Manufacturers' Association, represented by Mr. Kasturbhai Lalbhai.

2. Rampur Maize Products, Ltd., Rampur, represented by Dr. Van Gelder.

3. Hindustan Colour Chemicals, Kathwada, represented by Mr. R. R. Anada.

APPENDIX II—*contd.*

Consumers :—

1. The Buckingham and Carnatic Mills, Limited, Madras, Managing Agents Messrs. Binny & Co., Madras, represented by Mr. A. E. Jones.

2. The Kohinoor Mills, Naigaum, Dadar, Bombay, represented by Mr. Bracewell.

3. E. D. Sassoon Group of Mills, Bombay, represented by Mr. C. J. Soneji.

4. The Standard Mills, Bombay, represented by Mr. Vishwanath A. Ajagaonkar, Weaving Master.

Importers :—

1. Corn Products (India), Limited, Bombay, represented by Mr. Salzer assisted by Mr. Sardesh Pandey.

2. Sizing Materials Co., Ltd., Bombay, represented by Mr. Scott.

Officials and others :—

Textile Commissioner, Government of India, Bombay, Mr. Dharma Vira, O.B.E., I.C.S., assisted by Mr. S. W. Shiweshwarkar, O.B.E., I.C.S., and Mr. H. D. Doongaji.

APPENDIX III

List of the Factories

	Name of the factory	
1.	Anil Starch Products, Ltd., Ahmedabad	Licensed.
2.	Bharat Starch & Chemicals, Ltd., Abdullapur	,,
3.	Hindustan Colour Chemicals & Mfg. Co., Kathwada	,,
4.	Rampur Maize Products, Ltd., Rampur	,,
5.	U. P. Sales Corporation, Ltd., Seohara (District Bijnor)	,,
6.	U. P. Sales Corporation, Ltd., Hargaon (District Sitapur)	,,
7.	India Starch & Chemicals. Ltd., Kalol	,,
8.	Narang Industries, Ltd., Nawabgunj, U. P.	,,
9.	Sabarvalley Kaolin & Starch Industries, Ltd., Arsodia, (Idar State)	,,
10.	Pearl Products, Ltd., Cawnpore, U. P.	,,
11.	Hyderabad Starch Products, Ltd., Hyderabad (State)	,,
12.	Union Starch & Chemicals, Ltd., Balasinor (State)	,,
13.	Sukhjit Starch & Chemicals, Ltd., Phagwara (Kapurthala State)	,,
14.	Starch Products, Ltd., Cambay	,,
15.	Kashyap Industries Ltd., Lahore	,,
16.	Pioneer Pure Products, Ltd., Shahdara (Lahore)	,,
17.	Eastern Textile & Allied Products, Ltd., Batala (Punjab)	,,
18.	Premier Industries & Finance India, Chheharta (Punjab)	,,
19.	Shirgaonkar Brothers, Dewas Jr. (State)	,,
20.	Faridkot Maize Products, Ltd., Faridkot (Pb.)	,,
21.	Gwalior Maize Products, Ltd., Mandsaur (Gwalior State)	,,
22.	Jaipur Maize Products, Ltd., (Jaipur State)	,,
23.	Patiala Starch & Chemicals, Ltd., Rajputana	,,
24.	Randerian Rubber Chemical Works, Delhi	,,

APPENDIX III—*contd.*

25.	Ravikiran Industries Mfg. Co., Sholapur	Unlicensed.
26.	Bio-Chemical Works, Cawnpore	,,
27	Kotah Starch Products, Ltd., Kotah (State)	,,
28.	Shri Laxmi Starch & Chemicals, Ltd., Billimora (Baroda)	,,
29.	Purnavalley Starch Products, Ltd., Ellichpur, C. P.	,,
30.	Bharat Chemical Industries, Ltd., Billimora	,,
31.	Hari Starch Products, Ujhani (District Badav , U. P.)	,,
32.	Chemical Products Co., Petlad (Baroda State)	,,
33.	Modern Chemical & Starch Mills, Amritsar	,,
34.	Chemista Products Co., Ahmedabad	,,
35.	Starch Products (India), Calcutta	,,
36.	Aurora Chemical Industries, Amritsar	,,
37.	Laxmi Starch Mfg. Co., Amritsar	,,
38.	Manohar Starch Factory, Amritsar	,,
39.	Search Light Starch & Gum Mfg. Co., Anand	,,
40.	Sulphur Products, Baroda	,,
41.	New Cawnpore Flour Mills, Cawnpore	

APPENDIX IV

Statement showing the quantity, value and average value per cwt. of imports of starch into India since 1936-37

		1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46
I. Quantity of Imports from :—											
(1) U. K.	Cwt. (000)	1·26	1·53	2·11	2·75	1·28	0·11	....	0·02	Information not available.	
(2) Burma	„	....	....	15·26	57·74	78·39	111·90	0·02	....	„	„
(3) Netherlands	„	94·06	52·08	28·89	26·33	3·77	....	....	....	„	„
(4) Germany	„	122·25	157·79	73·82	3·20	....	....	....	....	„	„
(5) Belgium	„	15·47	11·54	9·55	1·28	0·02	....	....	....	„	„
(6) Yugoslavia	„	1·50	1·61	3·14	1·57	....	....	....	....	„	„
(7) Hungary	„	0·59	1·18	0·85	1·09	0·20	....	....	....	„	„
(8) Japan	„	0·07	30·98	22·00	12·94	4·93	2·29	....	....	„	„
(9) U. S. A.	„	11·48	76·53	162·95	212·39	199·19	222·89	50·01	2·96	„	„
(10) Argentina Republic	„	....	....	....	....	....	26·00	11·25	3·40	„	„
(11) Other Countries	„	4·99	9·84	4·03	2·80	5·44	0·82	0·07	....	„	„
Total Imports	„	251·16*	343·08	322·60	322·09	93·22	364·01	61·35	6·38	„	„

*Excluding Imports into Burma.

II. Value of Imports from :—

(1) U. K.	Rs. (Lakhs)	0·32	0·32	0·38	0·59	0·31	0·06	....	0·01	Information not available.	
(2) Burma	„	....	....	1·08	5·86	9·99	16·86	....	....	„	„
(3) Netherlands	„	7·80	5·15	3·97	4·16	0·79	....	....	....	„	„
(4) Germany	„	8·30	12·57	5·00	0·26	....	....	....	....	„	„
(5) Belgium	„	1·05	0·94	0·64	0·09	0·01	....		....	„	„
(6) Yugoslavia	„	0·14	0·15	0·32	0·18	....	....	....	....	„	„
(7) Hungary	„	0·06	0·14	0·11	0·16	0·03	....	....	....	„	„
(8) Japan	„	0·01	2·35	1·46	1·82	0·96	0·37	....	....	„	„
(9) U. S. A.	„	0·85	5·80	10·49	17·82	25·05	35·33	9·33	0·57	„	„
(10) Argentina	„	....	....	....	....	....	4·18	3·49	1·12	„	„
(11) Other Countries	„	0·30	0·62	0·43	0·40	0·79	0·23	0·04	....	„	„
Total Imports	„	18·76*	28·04	23·88	31·34	37·93	57·03	12·86	1·70	„	„

III. Average Value per cwt. of Imports from :—

(1) U. K.	Rs. as.	25 7	21 0	18 0	21 5	24 10	51 15	50 11	50 6	Information not available.	
(2) Burma	„	....	....	7 1	10 2	12 12	15 1	15 13	....	„	„
(3) Netherlands	„	8 5	9 14	16 0	15 13	20 15	....	....	....	„	„
(4) Germany	„	6 12	8 0	6 12	8 4	....	....	....	....	„	„
(5) Belgium	„	6 12	8 2	6 11	7 0	28 0	....	....	....	„	„

* Excluding imports into Burma.

APPENDIX IV—*contd.*

		1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46
(6) Yugoslavia	Rs. a.	9 1	9 4	10 5	11 5	....	....	....	....	Information not available.	
(7) Hungary	„	10 3	11 13	12 6	14 8	17 1	....	....	....	„	„
(8) Japan	„	12 9	7 9	6 10	14 0	19 8	16 1	....	....	„	„
(9) U. S. A.	„	7 7	7 9	6 7	8 6	12 9	15 14	18 11	19 5	„	„
(10) Argentina Republic	„	....	....	....	....	....	16 1	31 0	32 14	„	„
Total Imports	„	7 8	8 3	7 6	9 12	12 15	15 11	20 15	26 10	„	„

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APPENDIX V

Statement showing the quantity, value and average value per cwt. of imports of Dextrine into India since 1936-37

		1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46
I. Quantity of Imports from :—											
(1) U. K.	Cwt. (000)	0·24	0·39	0·40	0·60	0·48	0·08	....	....	Information not available.	
(2) Burma	„	....	....	....	0·30	1·12	3·65	....	....	„	„
(3) Germany	„	11·76	6·75	2·30	0·56	....	....	....	....	„	„
(4) Netherlands	„	12·95	9·06	11·65	14·76	3·38	....	....	....	„	„
(5) Japan	„	4·10	12·84	2·10	3·14	1·40	2·27	....	....	„	„
(6) U. S. A.	„	0·04	0·14	5·17	10·24	14·29	21·53	8·79	....	„	„
(7) Other Countries	„	0·39	0·17	....	....	2·12	0·04	....	....	„	„
Total Imports	„	29·28*	29·35	21·61	29·59	22·79	27·57	8·79	....	„	„
II. Value of Imports from :—											
(1) U. K.	Rs. (Lakhs)	0·05	0·07	0·07	0·12	0·13	0·02	....	....	Information not available.	
(2) Burma	„	....	....	....	0·03	0·21	0·82	....	....	„	„
(3) Germany	„	1·10	0·68	0·22	0·06	....	....	....	....	„	„
(4) Netherlands	„	1·30	1·01	1·24	1·68	0·58	....	....	....	„	„

(5) Japan	,,	0·38	1·20	0·19	0·62	0·27	0·72	....	....	,,	,,
(6) U. S. A.	,,	0·01	0·02	0·50	1·24	2·24	4·16	1·50	....	,,	,,
(7) Other Countries	,,	0·04	0·02	....	0·01	0·30	0·02	....	....	,,	,,
Total Imports	,,	2·86*	3·00	2·22	3·76	3·73	5·74	1·50	....	,,	,,

III. Average Value per cwt. of Imports from :—

(1) U. K.	Rs. as.	21 13	19 2	18 11	20 10	26 15	29 6	....	....	Information not available.	
(2) Burma	,,	....	....	....	11 6	18 6	22 7	....	....	,,	,,
(3) Germany	,,	9 6	10 1	9 9	10 1	....	....	....	....	,,	,,
(4) Netherlands	,,	10 1	11 3	10 11	11 6	17 1	....	....	....	,,	,,
(5) Japan	,,	9 4	9 5	8 13	19 14	19 6	31 10	....	....	,,	,,
(6) U. S. A.	,,	12 9	12 2	9 10	12 2	15 10	19 6	17 2	....	,,	,,
Total Imports	,,	9 12	10 3	10 4	12 11	16 6	20 13	17 2	....	,,	,,

*Excluding imports into Burma.

Statement showing the quantity, value and average value per cwt. of Imports of Farina and Potato Flour into India since 1936-37

		1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46
I. Quantity of Imports from :—											
(1) U. K.	Cwt. (000)	0·79	2·62	1·15	0·32	0·06	....	....	....	Information not available.	
(2) Germany	,,	2·28	0·20	0·40	....	....	....	....	....	,,	,,
(3) Netherlands	,,	82·14	75·20	64·33	63·83	21·39	....	....	....	,,	,,
(4) Japan	,,	0·15	9·96	17·57	15·03	13·47	22·81	....	....	,,	,,
(5) China	,,	....	....	....	....	4·93	0·86	....	....	,,	,,
(6) Other Countries	,,	1·39	0·05	....	0·04	....	....	....	....	,,	,,
Total Imports	,,	86·75	88·03	83·45	79·22	39·84	23·67	....	....	,,	,,
II. Value of Imports from :—											
(1) U. K.	Rs. (Lakhs)	0·07	0·25	0·10	0·04	0·01	....	....	....	,,	,,
(2) Germany	,,	0·17	0·02	0·03	....	....	....	....	....	,,	,,
(3) Netherlands	,,	6·22	6·70	5·64	6·90	2·77	....	....	....	,,	,,
(4) Japan	,,	0·02	0·70	1·12	2·32	2·82	3·73	....	....	,,	,,

(5) China	,,	....	....	....	....	0·68	0·16	....	....	,,	,,
(6) Other Countries	,,	0·09	0·01	....	....	....	....	....	....	,,	,,
Total Imports	,,	6·57	7·67	6·89	9·26	6·28	3·89	....	....	,,	,,
III. Average Value per cwt. of Imports from :—	Rs. as.										
(1) U. K.		8 11	9 9	8 10	11 11	22 13	.....	....	....	Information not available	
(2) Germany	,,	7 6	9 10	8 5	....	....	....	....	....	,,	,,
(3) Netherlands	,,	7 9	8 15	8 12	10 13	12 15	....	....	....	,,	,,
(4) Japan	,,	11 3	7 0	6 6	15 7	20 15	16 6	....	....	,,	,,
(5) China	,,	....	....	....	....	13 13	18 9	....	....	,,	,,
Total Imports	,,	7 9	8 12	8 4	11 11	15 1	16 7	....	....	,,	,,

Statement showing the quantity, value and average value per cwt. of imports of Sago Flour into India since 1936-37

		1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46
I. Quantity of Imports from :—											
(1) U. K.	Cwt. (000)	1·71	2·03	....	1·81	0·07	....	....	....	Information not available.	
(2) Burma	„	....	2·03	0·32	....	....	....	....	....	„	„
(3) Straits Settlements	„	310·48	376·39	336·84	333·97	431·01	572·05	....	....	„	„
(4) Federated Malay States.	„	0·10	0·28	0·27	1·79	3·14	1·44	....	....	„	„
(5) Other Countries	„	....	0·58	....	0·36	0·13	0·56	....	....	„	„
Total Imports	„	311·92*	381·31	337·43	337·93	434·35	574·05	....	....	„	„
II. Value of Imports from :—											
(1) U. K.	Rs. (Lakhs)	0·15	0·21	....	0·12	0·01	....	....	....	„	„
(2) Burma	„	....	0·14	0·01	....	....	....	....	....	„	„
(3) Straits Settlements	„	15·74	20·32	15·02	25·40	36·67	54·91	....	....	„	„

(4) Federated Malay States.	„	0·01	0·02	0·01	0·16	0·26	0·16	--	--	„	„
(5) Other Countries	„	....	0·04	....	0·03	0·01	0·05	....	....	„	„
Total Imports	„	15·89*	20·73	15·04	25·71	35·95	55·12	....	....	„	„
III. Average Value per cwt. of Imports from :—											
(1) U. K.	Rs. as.	8 15	10 5	....	6 10	12 8	....	....	....	„	„
(2) Burma	„	....	7 1	4 5	13 14	....	....	....	....	„	„
(3) Straits Settlements	„	5 1	5 6	4 7	7 10	8 4	9 10	....	....	„	„
(4) Federated Malay States.	„	5 15	7 2	5 2	8 14	8 6	10 13	....	....	„	„
Total Imports	„	5 1	5 7	4 7	7 10	8 4	9 10	15 9	....	„	„

*Excluding Imports into Burma.

Statement showing the quantity and value of imports of Starch, Dextrine and Farina (Total) into India since 1936-37

		1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46
I. Quantity of Imports from :—											
(1) U. K.	Cwts. (Lakhs)	0·04	0·07	0·04	0·05	0·02	....	....	....	Information not available	
(2) Burma	„	....	0·02	0·16	0·58	0·80	1·16	....	....	„	„
(3) Straits Settlements	„	3·10	3·76	3·37	3·34	4·31	5·72	....	....	„	„
(4) Germany	„	1·36	1·65	0·77	0·04	....	....	....	....	„	„
(5) Netherlands	„	1·89	1·36	1·05	1·06	0·29	....	....	....	„	„
(6) Belgium	„	0·16	0·12	0·10	0·01	....	....	....	....	„	„
(7) Java	„	0·04	0·07	....	....	....	....	....	....	„	„
(8) Japan	„	0·04	0·54	0·42	0·31	0·20	0·28	....	....	„	„
(9) U. S. A.	„	0·12	0·77	1·68	2·23	2·13	2·44	0·59	0·03	„	„
(10) Argentina Republic	„	....	....	....	....	....	0·26	0·11	0·03	„	„
(11) Other Countries	„	0·09	0·06	0·06	0·08	0·16	0·03	....	....	„	„
Total Imports	„	6·79*	8·42	7·65	7·69	7·91	9·89	0·70	0·06	0·07	0·12

*Excluding Imports into Burma.

II. Value of Imports from :—

(1) U. K.	Rs. (Lakhs)	0·60	0·86	0·55	0·87	0·46	0·08	....	....	Information not available.	
(2) Burma	„	....	0·14	1·09	5·89	10·21	17·69	....	....	„	„
(3) Straits Settlements	„	15·74	20·32	15·02	25·40	35·67	54·91	....	....	„	„
(4) Germany	„	9·57	13·27	5·25	0·32	....	....	....	....	„	„
(5) Netherlands	„	15·32	12·86	10·86	12·71	4·14	....	....	....	„	„
(6) Belgium	„	1·06	0·94	0·64	0·09	0·01	....	....	....	„	„
(7) Java	„	– 0·20	0·33	0·01	....	....	....	....	....	„	„
(8) Japan	„	0·40	4·24	2·76	4·76	4·05	4·86	....	....	„	„
(9) U. S. A.	„	0·86	5·82	10·99	19·06	27·28	39·50	10·83	0·57	„	„
(10) Argentina Republic.	„	....	....	....	....	....	4·18	3·49	1·12	„	„
(11) Other Countries	„	0·44	0·66	0·87	0·94	2·08	0·56	0·04	0·01	„	„
Total Imports	„	44·08*	59·44	48·04	70·07	83·90	121·78	14·36	1·70	1·92	2·33

*Excluding imports into Burma.

APPENDIX

Area and yield of the Maize crop by Provinces

Area

Acres (000)

	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44
British Provinces :—								
Ajmer-Merwara ..	62	52	51	46	61	52	70	60
Bengal	73	74	67	68	85	92	122	140
Bihar	1642	1553	1521	1481	1407	1461	1652	1513
Bombay	185	164	173	190	186	181	170	177
Central Provinces and Berar.	154	152	152	155	152	150	150	150
Delhi	3	2	2	2	2	1	2	2
Madras	81	72	64	75	68	66	60	63
North-West Frontier Province.	457	471	486	465	471	469	481	478
Orissa	28	29	28	28	28	28	29	31
Punjab	1078	1103	1110	1143	1144	1188	1301	1327
Sind	3	3	3	3	3	3	3	3
United Provinces ..	1965	1948	2054	2098	2111	1920	2424	2495
Total, British Provinces ..	5731	5623	5711	5754	5718	5611	6464	6439
Indian States :—								
Baroda	..	..	..	..	..	..	3	1
Hyderabad ..	659	651	618	624	534	599	402	429
Khairpur (Sind) ..	..	..	..	..	..	..	(c)	(c)
Mysore	1	2	1	2	1	1	1	1
Total, Indian States (*b*) ..	660	653	619	626	535	600	406	431
Grand Total (*b*) ..	6391	6276	6330	6380	6253	6211	6870	6870

(*a*) Not available. (*b*) Incomplete. (*c*) Below 500 tons.

Note.—No forecast is prepared for this crop except by the Punjab. The figures for other authorities.

VI

and States during the years 1936-37 to 1943-44

Yield							
Tons (000)							
1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44
12	11	10	7	12	10	9	8
24	24	21	22	26	29	33	48
432	445	352	441	393	456	558	435
54	49	71	47	76	56	34	55
82	85	76	89	78	68	75	63
(c)	1	(d)	(c)	1	(c)	1	1
34	31	27	32	32	27	25	26
214	220	214	230	211	202	202	197
7	6	7	8	6	6	7	7
392	406	384	405	448	463	465	504
1	1	1	1	1	1	1	1
534	730	607	836	811	594	946	932
1836	2009	1770	2118	2095	1912	2356	2277
....	....	....	....	....	..	(a)	(c)
110	108	104	105	101	103	52	52
....	....	....	....	....	..	(c)	(c)
(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
110	108	104	105	101	103	52	52
1946	2117	1874	2223	2196	2015	2408	2329

(d) 500 tons. ( ) Below 500 acres.
tracts are taken from the provincial Season and Crop Reports or specially obtained from local

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REPORT

OF THE

INDIAN TARIFF BOARD

ON THE

STEEL BALING HOOPS INDUSTRY

108646

1946

PERSONNEL OF THE BOARD.

SIR R. K. SHANMUKHAM CHETTY, K.C.I.E.—PRESIDENT.

MR. C. C. DESAI, C.I.E., I.C.S.—MEMBER-SECRETARY.

DR. NAZIR AHMAD, O.B.E.—MEMBER.

DR. H. L. DEY, D.SC. (Lond.)—MEMBER.

DR. B. K. MADAN, M.A., PH.D.—DEPUTY SECRETARY.

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REPORT ON THE STEEL BALING HOOPS INDUSTRY

Reference to the Board.

1. Steel hoops for baling was one of the industries referred to the Board for investigation of its claim for assistance or protection under Government of India, Department of Commerce, Resolution No. 218-T (55)/45, dated the 3rd November 1945 (Appendix I). The Resolution stated, *inter alia*, that pending the formulation of a tariff policy appropriate to the post-war needs and conditions of the country and the establishment of a permanent machinery for the purpose, Government would set up machinery for investigating claims from industries which had been started or developed in wartime and which were established on sound lines to assistance or protection during the transition period.

Scope of inquiry.

2. In referring the industry to the Board, Government directed that the Board should, after such examination as it might consider necessary, report whether the industry satisfied the following conditions :—

(1) that it is established and conducted on sound business lines; and

(2) (*a*) that, having regard to the natural or economic advantages enjoyed by the industry and its actual or probable costs, it is likely within a reasonable time to develop sufficiently to be able to carry on successfully without protection or State assistance; or

(*b*) that it is an industry to which it is desirable in the national interest to grant protection or assistance and that the probable cost of such protection or assistance to the community is not excessive.

Where a claim to protection or assistance is found to be established, *i.e.*, if condition (1) and condition (2) (*a*) or (*b*) are satisfied the Board will recommend—

(i) whether, at what rate and in respect of what articles, or class or description of articles, a protective duty should be imposed;

(ii) what additional or alternative measures should be taken to protect or assist the industry; and

(iii) for what period, not exceeding three years, the tariff or other measures recommended should remain in force.

Government further directed that in making its recommendations the Board should give due weight to the interests of the consumers in the light of the prevailing conditions and also consider how its recommendations would affect industries using the articles in respect of which protection might be granted.

In our report on calcium chloride, we have drawn a comparison between the terms of reference of this Board and of previous Tariff

Boards. Briefly, as we have pointed out, the tests which an industry must fulfil before it can qualify for protection or assistance are now less stringent in view of the desirability of pursuing a liberal protective policy in the context of the recently announced Government industrial policy. Generally, the broad criterion to be adopted is that, unless an industry started during wartime suffers from inherent economic handicaps, there is a *prima facie* case for helping it to keep alive until a detailed examination of its position and prospects in the light of a long-range policy of industrial protection could be undertaken. This, it is presumed, is one of the reasons why the period for which protection or assistance might be recommended by the Board is limited to a period not exceeding three years.

Method of inquiry.

3. On the 28th November 1945, the Board issued a press communiqué inviting associations, firms or persons, including producers, importers and consumers, directly interested in this industry or dependent upon this industry for their raw materials, who wished their views to be considered by the Board, to submit their representations by the end of December 1945. The representations were required to be supported by facts and figures regarding, *inter alia*,

(1) domestic demand for the commodity;
(2) volume and cost of imports;
(3) cost of production;
(4) general financial position of the producers; and
(5) the exact nature of protection or assistance applied for.

4. The Board also issued a detailed questionnaire for producers inviting replies by the 15th February 1946. All Provincial Governments and Administrations were addressed and requested, besides giving their views, to furnish the Board with full information regarding the works or factories engaged in the production of steel hoops for baling, their estimated annual output, availability of raw materials for the industry within the Province/Administration, sources and character of demand, possibilities of extension or stabilization of the present development and likely effect of the grant of protection to this industry on other industries using steel hoops for baling. The views of chambers of commerce and associations were invited through a circular letter. As the steel hoops industry was started during wartime under direct encouragement from the Supply Department, the Industries and Supplies Department was requested to furnish the Board with such information regarding the present state of development of the industry and its future prospects as might be available with the Department and might be of use to the Board. The views of the Indian Central Cotton Committee, the Bombay and Ahmedabad Mill Owners' Associations, the Indian Jute Mills' Association, and the Indian Central Jute Committee were invited in regard to the quality of Indian-made hoops and their suitability for baling raw cotton and

for jute and cotton manufactures in comparison with imported hoops. The British Iron and Steel Federation and the National Association for rolled and re-rolled steel products, besides the Cochin Chamber of Commerce, sent representations to the Board opposing application for protection to the steel baling hoops industry, on the ground of the unsuitability of Indian-made hoops in respect of both quality and high cost in relation to imported hoops. Leading importers were requested to furnish the Board with information regarding the detailed break-up of the landed costs of the imported jute and cotton baling hoops. A list of producers, consumers and importers, who submitted written evidence to the Board, is appended. (Appendix II.)

5. The President, Sir Shanmukham Chetty, paid a visit to the J. K. Iron and Steel Company's works, Cawnpore, on the 5th April 1946, accompanied by an officer of the Industries and Supplies Department. Oral evidence of representatives of producers, consumers and importers was taken at Calcutta on the 9th, 10th and 11th April 1946 and a list of the witnesses examined is appended. (Appendix III.)

Application for protection.

6. The original application for assistance or protection to the steel baling hoops industry was received from the J. K. Iron and Steel Company, Limited, Cawnpore, on the 5th June 1945, in a representation addressed to the Commerce Department in response to the Government of India press communiqué inviting claims from wartime industries to assistance or protection during the transition period. On the 28th December 1945, the Company submitted a representation to the Board in response to our press communiqué of the 28th November 1945. The representation referred to the following main requests of the Company for assistance or protection :—

(*a*) arrangements for the supply of billets to it from the main steel producers so as to enable the Company to run its mills to full capacity in order to reduce costs and meet the entire demand for jute baling hoops, in the production of which the company is primarily engaged;

(*b*) the supply of cheap billets or grant of subsidy to the extent of the subsidy which the Company has reason to believe was being given in the United Kingdom or, alternatively, grant of protection through the levy of additional duty;

(*c*) the grant of specially low railway rates having regard to the low frieght rates prevailing in other countries, *e.g.*, Canada; and

(*d*) assistance to import additional plant.

Assistance and protection was requested for five years.

On the 22nd January 1946, the Mysore Iron and Steel Works, Bhadravati, submitted a representation for protection or assistance to the baling hoops industry in response to the Board's press communiqué. The representation made the following requests

in regard to the industry and the measure of assistance or protection required :—

" (i) that the selling price of the Indian manufacture may be continued at the present level of Rs. 900 per ton ex producer's works till the end of June 1946;

(ii) that the selling price for the succeeding three years ending June 1949 may be fixed in relation to the anticipated reasonable cost of manufacture of the indigenous product from year to year, with due reference to variation in costs of materials and working conditions, if any, that may occur during each period;

(iii) that on the above basis the fair selling price ex-works, in our case for the year ending the 1st July 1947, be fixed at Rs. 617·41 or, say, Rs. 620 subject to the revision mentioned above;

(iv) that due protection against competition from foreign imports be given during the period by levying a suitable protective duty or by other means; and

(v) that facilities be provided for making available to the works the requisite quantity of billets at fixed prices either from surplus manufacture in the country or by imports."

History of the industry.

7. Before the war, steel hoops for baling were not manufactured in India, all the requirements of the country being met by imports from abroad. The statistics of sea-borne trade give the total figures of imports of all kinds of hoops and strips but do not give separate figures for the different categories of hoops. The figures of imports for different years are given in a later paragraph of this report (paragraph 12). In 1936, the J. K. Iron and Steel Company, Limited, Cawnpore, was formed for the manufacture of steel baling hoops. The main equipment was supplied by the Czechoslovakian firm of Skodas; but on account of the outbreak of war, the technical assistance on which the Company had counted for the erection and the initial running of the mill was not available. When production was actually started in 1940, the mill had to be operated without the benefit of any expert technical advice. This was one of the serious handicaps which the Company had to face as the production of steel hoops requires technical skill of a high order. The Company had also installed an electric furnace for the production of mild steel billets. Since 1943 the entire demand of the jute industry for steel hoops has been met by the J. K. Iron and Steel Company. The Iron and Steel Controller directed this Company to concentrate on the manufacture of jute baling hoops as the Company was unable to overcome the additional technical difficulties involved in the production of cotton baling hoops. In 1942–43, a shortage of cotton baling hoops was anticipated and it was decided to get some quantity manufactured in the country. The J. K. Iron and Steel Company was unable to roll the $\frac{3}{4}$ inch × 20 B.G. steel hoop which is the most common specification

for baling cotton, but they agreed to roll $\frac{3}{4}$ inch × 16 B.G. as a substitute. This proposal was accepted by the Steel Controller and the Company produced in all 573 tons of cotton baling hoops in 1943. Thereafter, they confined themselves to the production of jute baling hoops till the middle of 1945 when they stated that they were in a position to roll cotton baling hoops of $\frac{3}{4}$ inch × 20 B.G. and received a trial order for 1,000 tons. In the meantime, the Indian Steel Rolling Mills at Negapatam agreed to roll $\frac{3}{4}$ inch × 20 B.G. although their mill was not designed for this purpose. In all, the Negapatam Mills produced about 3,000 tons of cotton baling hoops; since then they have discontinued the production of any baling hoops.

8. The Mysore Iron and Steel Works at Bhadravati had decided some time before the outbreak of war to install in their works additional equipment for manufacturing steel hoops. After operating their bar and rod mill for some months, hoops were rolled with the new equipment. Since the rolling of hoops curtailed the production of bars and rods for which the demand was increasing, the manufacture of hoops was suspended for the time being. The question of the continuous manufacture of baling hoops without affecting the production of other sections was again taken up and proposals for putting up an additional mill utilizing the existing hoop-making equipment were under way when the war broke out in September 1939. In 1941 when the position regarding the supply of hoops was critical, the works made an offer to the Government of India that they would undertake the manufacture of cotton baling hoops. This offer was welcomed by the Central Government which gave the highest priorities for the supply of the necessary machinery from the United Kingdom and for the structural steel required from Indian manufacturers. Though the plant was erected in 1944, the works expect to commence regular production only from July 1946. For the present, until the production of pig iron and steel at Bhadravati is increased by the installation of an electric pig iron furnace and of the billet and light structural mill for which action is being taken, the mild steel billets required for the manufacture of steel hoops will have to be supplied from other sources of Indian production or imports from abroad.

The process.

9. The essential raw material for the hoop industry is steel billet of medium carbon content. The process of manufacturing steel ingots from iron smelted from the ore is carried out in the main steel works. The ingots are then reduced to suitable size by heating and cogging. In addition to the main steel works in the country, a number of small electric furnaces ranging in capacity from five to ten tons per charge have been set up for the manufacture of billets. Mild steel ingots are manufactured in these electric furnaces from mild steel scrap which is collected from railways, fabricating workshops,

etc. The manufacture of steel ingots from the electric furnace is, however, a very costly process. The small ingots produced in the electric furnace are sometimes rolled straight down to finished sections and in other cases they are cogged down to billets which are re-heated again and used in the finishing operations. In the re-rolling process, billets are heated and then rolled to the finished section required. In the finishing stages jute hoops are varnished. In the production of baling hoops suitable for the various articles to be press-packed, great care has to be taken, amongst other things, about the internal expanding pressure which the hoops have to withstand for the period they are under such pressure. The hoops must be of the required tensile strength and of the narrowest widths and the thinnest gauges best suited for the particular type of product to be press-baled. It is necessary to maintain an adequate safety margin and at the same time give the users a maximum footage per ton of hoops that will satisfy the purpose for which the hoops are required. In order to produce a specified tonnage of hoops, the manufacturer has to face special difficulties owing to the lightness of the finished section. To finish the hoop before it becomes too cold, the mill must be run at very high speeds, and expert labour and supervision are required.

Uses.

10. Steel baling hoops are mainly used for baling raw cotton, finished cotton goods and jute manufactures. Small quantities are also used for box strapping, paper baling and the baling of coir yarn. The size of hoop required for jute baling is 1 inch × 16 B.G. and for cotton baling $\frac{3}{4}$ inch × 20 B.G. Hoops used for box trapping and paper baling are cold-rolled and their size generally varies from $\frac{1}{2}$ inch to $\frac{3}{4}$ inch width and 24 to 26 B.G. The coir yarn industry generally uses cotton baling hoops.

Estimated demand.

11. According to the Indian Jute Mills Association, the demand for jute hoops is about 12,000 tons per annum based on an estimated gunny production of 100,000 tons per month. According to the information supplied by the Indian Central Cotton Committee, the quantity of hoops required for baling raw cotton is about 14,000 tons per annum based on an estimated normal crop of cotton of about 55 lakhs of bales out of which about 47 lakhs of bales may be expected to be pressed. The Indian Central Cotton Committee has recommended to the Government of India that the acreage under cotton during the 1946–47 season should not exceed that during the current season. If this recommendation is accepted, the quantity of hoops required for baling raw cotton in 1946–47 will be about 11,000 tons. The normal demand, however, may be taken at 14,000 tons of hoops per annum. It has not been possible for us to obtain accurate data regarding the quantity of hoops required for baling manufactured cotton goods. The difficulty of obtaining accurate estimates is partly due to the practice in the cotton trade of using second-hand hoops in the baling of finished cotton goods. It is

estimated, however, that the total quantity of hoops required for the cotton industry as a whole will be about 18,000 tons per annum. The coir yarn industry would require about 800 tons per annum. About 750 tons per year will be required for baling raw wool. Besides these, some quantity of strips for binding paper bales and for box strapping would also be required. The total demand of all categories of hoops may be taken at 30,000 to 35,000 tons per annum.

Imports.

12. The following table gives the total quantity of imports of hoops and strips and their value for different years :—

Figuees given are to the nearest hundred.

Year.	Quantity.	Value.
	TONS.	RS.
1936-37	41,200	53,91,600
1937-38	48,500	85,72,500
1938-39	24,500	48,68,600
1939-40	33,200	73,32,600
1940-41	45,900	1,46,69,200
1941-42	16,700	60,81,700
1942-43	10,900	46,72,400
1943-44	8,700	36,98,100
1944-45	16,400	71,64,500

In the pre-war years, considerable quantities were imported from Belgium, Germany, France and Japan. For instance, in 1936–37, while 15,200 tons were imported from the United Kingdom, 10,700 tons were imported from Belgium, 6,400 tons from Germany, 2,300 tons from France, and 1,500 tons from Japan. Besides, 2,800 tons were imported from the United States during that year. During the early years of the war, considerable quantities were imported from Japan and Belgium. In 1939–40, while the United Kingdom maintained its export to India and supplied 14,400 tons, Belgium's share was 6,000 tons, the share of France was 1,900 tons, the share of Japan was 5,500 tons, and that of the United States 2,200 tons. The United Kingdom kept up its exports to India in 1940–41 also and supplied 15,000 tons. In the same year Japan supplied 8,400 tons, the United States 18,300 tons, and Belgium 3,400 tons. In the next year 1941–42, the imports from the United Kingdom indicate a sharp rall to 5,900 tons. Japan sent 3,300 tons and the United States 7,300 tons. Thereafter imports from the United Kingdom became almost negligible and the only source of supply was the United States of America. It will thus be seen that the two main sources of supply in the pre-war years were the United Kingdom and the continent of Europe with Japan sharing a part of the import trade. During 1943–44 and 1944–45 practically all the imports came from the United States.

Domestic production.

13. There are at present only two concerns in the country manufacturing baling hoops, *viz.*, (1) the J. K. Iron and Steel Co., and (2) the Mysore Iron and Steel Works. Besides these, the Tata Iron and Steel Co., started the manufacture of cotton baling hoops at the Indian Steel Rolling Mills at Negapatam at the instance of the Government of India in December 1943, owing to the acute shortage of these hoops in the country. The Negapatam works were, however, not designed for this purpose, and therefore after a short time the manufacture of hoops was discontinued in May 1945. The Tata Iron and Steel Co. has informed us that it does not contemplate the manufacture of baling hoops at the Negapatam works under normal circumstances. The rated capacity of the J. K. Iron and Steel Co. is about 12,000 tons of jute hoops per annum provided the necessary quantity of billets is supplied. Its plant is specially designed for the manufacture of jute baling hoops, and if it is to undertake the manufacture of cotton baling hoops, certain major changes in the plant and machinery would be required. As a matter of fact, the actual production of the J.K. Iron and Steel Co. during the last three years has been as follows :—

YEAR.	TONS.
1942-43	5,030
1943-44	4,407
1944-45	5,857

The capacity of this factory to reach its maximum output depends entirely on the supply of billets. If billets either of domestic or of foreign origin are not supplied to it, it can run its plant only by making mild steel billets in its own electric furnace. Apart from the production of billets from the electric furnace being very costly, the capacity of the hoop mill is considerably higher than that of the electric furnace. Therefore, if the full capacity of this plant is to be realized, the necessary quantity of billets will have to be supplied. The plant of the Mysore Iron and Steel Works is specially designed for the manufacture of cotton baling hoops. Its rated capacity is 5,000 tons of cotton baling hoops per year, and it is proposed to extend the equipment as early as possible so as to double this quantity. In the case of the Mysore Iron and Steel Works also billets will have to be supplied for the present. They would, however, be in a position to manufacture their own billets from the middle of 1947. It would thus appear that, provided billets are made available, the entire quantity of 12,000 tons of jute hoops required by the jute industry can be manufactured in the country. The rated capacity of the plant available at Bhadravati for the manufacture of cotton baling hoops will, however, supply only about 25 per cent of the requirements of the cotton industry.

Arrangements made by the Steel Controller.

14. Before examining the cost of production, it would be helpful to give a brief account of the arrangements made by the Iron and Steel Controller with

re-rollers regarding the cost of manufacturing steel hoops and the selling price. On the 1st August 1941 the Iron and Steel (Control of Production and Distribution) Order, 1941, came into force. Under the provisions of this Order, the Iron and Steel Controller had not the power to control prices. However, in April 1942, by an agreement with the re-rollers conversion rates were fixed taking into account the special difficulties of the re-rollers. It was decided to treat hoop production as a special case. A scheme has been adopted under which the re-rollers sell their products at prices declared by the Iron and Steel Controller. This is the selling price. On the other hand, each re-roller is entitled to receive for his work a remuneration based on the cost of his materials and an agreed conversion, this being called his retention price. When in any transaction the amount realized from sales exceeds the retention price, the re-roller pays the excess to the Equalization Fund; and where the realization is less than the retention price, he is paid the difference from the Equalization Fund. Both the J. K. Iron and Steel Company and the Indian Steel Rolling Mills at Negapatam had been operating in accordance with this arrangement. The selling price of jute hoops was fixed at Rs. 770 per ton f.o.r. ports and of cotton hoops at Rs. 900 f.o.r. ports. The conversion rate was fixed on a sliding scale according to production. Since the operation of this scheme the selling price has been stabilised, while the retention price has varied in accordance with the decision arrived at by negotiations from time to time. On the basis of cost examination and negotiation, the retention price ex-works of jute hoops 1 inch by 16 B.G. has varied from Rs. 724 to Rs. 855 per ton in the case of the J. K. Iron and Steel Company. For the cotton baling hoops both the J. K. Iron and Steel Company and the Indian Steel Rolling Mills were given a retention price of Rs. 750 per ton for the first trial order of 1,000 tons in each case. Thereafter, the retention price was reduced to Rs. 580 per ton. Up to June 1945 the retention price allowed to J.K. Iron and Steel Company has been Rs. 724 per ton. The cost of the billet has been calculated at Rs. 330 per ton based on the cost of electric furnace billets. The retention price of Rs. 724 is, therefore, made up of Rs. 330 cost of billets plus Rs. 394 conversion cost. It is proposed by the Steel Controller to reduce the retention price from June 1945 to Rs. 652 per ton. The price of the billets which are supplied by the Iron and Steel Controller is taken as Rs. 276-8-0. This cost is arrived at as follows :—

	RS.	A.	P.
Price of billets f.o.r. port..	191	0	0
Railway freight to Cawnpore on billets	38	8	0
Wastage of 20 per cent	47	0	0
Total cost of billets ..	276	8	0

On the basis of the proposed retention price of Rs. 652, the conversion cost would be Rs. 375-8-0.

Cost of production.

15. In estimating the cost of production the only basis available is the actual experience of production by the J. K. Iron and Steel Company. The examination of the accounts of this company has been complicated by two main factors :

(*a*) besides baling hoops the company has been producing rods and bars and certain other miscellaneous products, and it does not maintain cost accounts showing separately the expenditure on each type of product;

(*b*) its expenses are not grouped under convenient heads which will show the actual expenses incurred on the different items of cost. The accounting system adopted by the company is to charge all expenditure under one or the other of four accounts, namely, steel production account, foundry account, rolling mill account and engineering account. In order, therefore, to find the expenditure on, say, power and fuel, it is necessary to analyse all the four accounts and pick out the debits made on various items throughout the year in each of them.

The company maintains accounts which are closed on the 30th April every year and are audited by a regular firm of auditors. The annual accounts and balance sheet for the year ending the 30th April 1945 have not yet been certified by the auditors because the rate for the closing stock of hoops has not been finally fixed by Government. During the year 1944–45, the production and costs were as follows :—

Product.	Quantity produced.	Cost.
	TONS.	RS.
Jute hoops	5,005	36,92,000
Cotton hoops	686	7,91,000
Commercial hoops of various sizes	144	1,31,000
Bars and rods	943	3,09,000
Foundry castings sold	..	74,000
Cutlery, small tools, fabrication work, etc. ..	..	3,79,000

In addition, there were 1,907 tons of defectives and the amount realized on the sale of these has been credited to the hoop costs. The manufacturing cost of jute hoops per ton including the cost of billets comes to Rs. 738 per ton of jute hoops and Rs. 1,162 per ton of cotton hoops. We have no hesitation in saying that these costs must be considered as inordinately high. The total labour cost is Rs. 11,08,000 which works out at Rs. 76 per ton of jute hoops and Rs. 159 per ton of cotton hoops. On the face of it the labour charges must be considered as unduly heavy. The expenditure under repairs and maintenance comes to Rs. 8,42,000 and under consumable stores to Rs. 10,38,000. A large part of the expenditure on consumable stores must be taken to be expenditure on repairs and maintenance. In other words, repair and maintenance charges amount to about Rs. 18·80 lakhs. No possible explanation can justify an expenditure of Rs. 18·80 lakhs

under repairs and maintenance on a factory of which the block has cost Rs. 19·5 lakhs! Per ton of jute hoops this item of expenditure comes to Rs. 148. General services, supervision and establishment have cost Rs. 4,83,000. This item represents salaries of the supervisory and office staff and the wages of watch and ward and general staff, which work out at Rs. 33 per ton of jute hoops and Rs. 69 per ton of cotton hoops. We have picked out only a few representative items of expenditure to show that the expenditure involved on these items is exorbitantly high and is certainly capable of reduction. The average conversion cost of jute hoops comes to Rs. 340 per ton.

16. Fortunately, the Mysore Iron and Steel Works have furnished us with their own estimates of the cost of manufacture of cotton baling hoops. Though the figures supplied are only estimates, they may be taken as providing a fair guidance for arriving at a reasonable cost of conversion. It must be remembered that the cost of conversion in the case of cotton baling hoops is definitely higher than for jute baling hoops. On a production of 50 per cent. of the rated capacity, the Mysore Iron and Steel Works have estimated that labour will cost Rs. 50·60 per ton, salaries Rs. 23·46 per ton, and repairs and supplies including the renewal of rolls Rs. 30 per ton, and general expenses of administration and management Rs. 21·28 per ton. After making the necessary adjustments in the estimate of the Mysore Iron and Steel Works for the value of return on scrap and for return at 10 per cent. on the fixed capital expenditure, the conversion cost comes to Rs. 320 per ton. This conversion cost covers all items of expenditure inclusive of the manufacturer's profit. The J. K. Iron and Steel Company also has worked approximately to 50 per cent. of their rated capacity and yet their conversion cost for jute baling hoops is Rs. 340 per ton. The J. K. Iron and Steel Company has contended that even this conversion cost does not cover the interest on working capital and the manufacturer's profit. But an examination of its own balance sheets for the years 1942–43 and 1943–44 discloses that very considerable profits have been made on the operation of its works. Though the profit disclosed in the balance sheet represents the profit made on the manufacture of articles besides hoops, it would be reasonable to infer that the hoop manufacture also has given a substantial profit.

Board's estimate of the cost of production.

17. As indicated in the previous paragraph we have no accurate data of actual costs based on production. Under the circumstances the Board has to make an estimate of what it considers to be a reasonable cost after taking into account the experience gained by the J. K. Iron and Steel Company, the estimates furnished by the Mysore Iron and Steel Works and the information available regarding the conversion cost of jute and cotton baling hoops in the United Kingdom. In arriving at an estimate of cost for the

purpose of this inquiry we have to assume a fixed price for the billets. It is not really a function of the re-roller to produce the billets himself. He has to work on billets which are made available to him. The re-roller is therefore responsible only for the cost of conversion.

Under the present circumstances, we think that a price of Rs. 160 per ton f.o.r. port for steel billets of medium carbon content may be considered reasonable. We understand that the Iron and Steel Controller has arranged for the supply of billets to some of the re-rollers at Rs. 156 per ton f.o.r. port from 1st April 1946. Adding Rs. 4 per ton for quality, Rs. 160 per ton f.o.r. port would be a reasonable cost of billets for the hoop industry. We indicate in another paragraph the manner in which billets should be made available to the hoop industry at this price. Assuming that the hoop manufacturer would get his billets at Rs. 160 per ton f.o.r. port, we must first decide what should be the percentage of wastage to be allowed from billets to finished hoop. We were informed that in the United Kingdom for every 100 tons of billets 92 tons of finished jute hoops would be recovered, and 5 tons of saleable scrap would be produced. The balance of 3 tons represents the absolute irrecoverable loss. In the manufacture of cotton hoops there would be a recovery of 89 tons of finished hoops and 7 tons of saleable scrap with an absolute loss of 4 tons. From the records of the J. K. Iron and Steel Company it was found by our Cost Accountant that during 1944–45 for every 100 tons of billets only 72 tons of finished hoops were recovered with a balance of 21 tons of saleable scrap and 7 tons as irrecoverable loss. Compared with the results achieved in the United Kingdom this must be considered to be an unsatisfactory performance. We fully realise that the United Kingdom re-roller has long experience, skilled labour and efficient and highly mechanised equipment. Even making due allowance for the handicaps of the Indian re-roller in these matters, we think that any reasonably efficient mill in India should produce for 100 tons of billets at least 85 tons of finished jute hoops and 12 tons of saleable scrap and 3 tons representing irrecoverable loss. In the case of cotton hoops the corresponding figures should be at least 80 tons of finished hoops, 16 tons of saleable scrap and 4 tons representing irrecoverable loss.

18. Having arrived at an estimate of the cost of billets and the reasonable percentage of loss that should be allowed, we may now make an estimate of what should be a reasonable conversion cost. Here again, we have to base our estimate on the information available from various sources. We were told that the conversion cost of jute hoops in the United Kingdom is about Rs. 103 per ton and of cotton hoops Rs. 136 per ton. The conversion cost includes not merely the primary cost of manufacture but the expenses under depreciation, overhead charges, interest on working capital and profit on the manufacturer's capital as well. In the following

paragraphs of our report the term "conversion cost" is used in this wider sense. Analysing the cost of production of the J. K. Iron and Steel Company for 1944–45 it is found that the conversion cost comes to Rs. 340 per ton on a production of 5,000 tons, excluding the manufacturer's profit. We consider that this cost is very high. In paragraph 15 above, we have given our comments on some of the main items of expenditure which we consider to be excessively high.

19. The Mysore Iron and Steel Works have furnished us with their estimate of the cost of production of cotton hoops. The cost of conversion of cotton hoops is higher than that of jute hoops. In the United Kingdom the difference is about Rs. 33 per ton. In India we may make an allowance for a difference of Rs. 60 to Rs. 70 per ton. According to the estimate of the Mysore Iron and Steel Works, after providing for a return of 4 per cent. on working capital and 10 per cent. on the fixed capital expenditurt, the conversion cost comes to Rs. 320 per ton of hoops on an estimated output of 50 per cent. of the rated capacity. Taking all these factors into consideration, we think that a conversion cost of Rs. 250 per ton of hoops would be reasonably ample in the case of the J. K. Iron and Steel Company. Based on these calculations, the cost of production per ton of jute hoops as estimated by the Board works out as follows. It must be remembered, as already indicated, that the cost of production covers every item of expenditure including the manufacturer's profit.

Board's estimate of the cost of production of one ton of jute hoops manufactured by the J. K. Iron and Steel Company at Cawnpore.

	RS.	A.	P.
1 Mild steel billets 1·18 tons at Rs. 160 per ton f.o.r. Calcutta	189	0	0
2 Railway freight on the billets from Calcutta to Cawnpore	45	0	0
3 Conversion cost including depreciation, overhead charges, interest on working capital and manufacturer's profit	250	0	0
4 Railway freight on hoops from Cawnpore to Calcutta	38	8	0
5 Selling charges	7	0	0
	529	8	0
Less credit for the recovery of 0·14 ton of defectives and scrap at Rs. 125 per ton	17	8	0
Net cost which represents the fair selling price f.o.r. Calcutta	512	0	0

Board's estimate of the cost of production of one ton of cotton hoops manufactured by the Mysore Iron and Steel Works, Bhadravati.

	RS.
1 Mild steel billets 1·25 tons at Rs. 160 per ton f.o.r. port	200
2 Railway freight from port to Bhadravati ..	35
3 Conversion cost including depreciation, overhead charges, interest on working capital and manufacturer's profit	320
4 Average freight on hoops to the consuming centres	17
5 Selling charges	5
	577
Less credit for the cost of recovery of 0·20 ton of scrap at Rs. 138 per ton	27
Net cost which represents the fair selling price f.o.r. consuming centre	550

Landed cost.

20. If we were confronted with difficulties in estimating the cost of production of the Indian manufacturer, it has been equally difficult for us to ascertain the exact c.i.f. price and landed cost in the case of cotton baling hoops. There is a 12 per cent *ad valorem* revenue duty on hoops imported from the United Kingdom. In respect of jute baling hoops, the landed cost has been furnished to us by one of the leading firm of importers as follows :—

	RS.
1 C.i.f. Calcutta	318
2 Clearing and landing charges	15
Total landed cost ex duty ..	333
3 Duty	38
Total landed cost with duty ..	371

There is, however, some discrepancy between the quotations for cotton baling hoops supplied to us. The landed cost of cotton baling hoops as given by a leading firm of importers is shown below :—

	RS.
1 C.i.f. port	428
2 Clearing and landing charges	15
Total landed cost ex duty ..	443
3 Duty	51
Total landed cost with duty ..	494

The Iron and Steel Controller has, however, informed us on the basis of a quotation received by him, that the landed cost of cotton baling hoops at present will be as follows :—

		Rs.
1	C.i.f. port	369
2	Clearing and landing charges	15
	Total landed cost ex duty ..	384
3	Duty	44
	Total landed cost with duty ..	428

It will be found that there is a difference of Rs. 59 in the landed cost ex duty as given by the importer and by the Iron and Steel Controller. The Board has not been able to ascertain the reasons for this difference. One possible explanation for the higher quotation given by the importer may be offered. Many of the importers have their own parent office or agents in London. Taking advantage of the demand for cotton baling hoops in India and the absence of indigenous production, the importers probably add a considerable profit for their agents in London and thereby inflate the c.i.f. price in India. This tendency to inflate the price of the imported cotton hoops is likely to continue in the absence of any indigenous production. It is rather significant that in the case of jute hoops no such disparity has been noted, obviously because the Indian manufacturer has a rated capacity to meet the entire Indian demand.

Measure of protection required.

21. We have found that the fair selling price of jute hoops for the J. K. Iron and Steel Company is Rs. 512 f.o.r. Calcutta. The landed cost ex duty of imported jute hoops is Rs. 333. The measure of protection required would therefore be Rs. 179 per ton. In the case of cotton baling hoops the fair selling price of Mysore Iron and Steel Works is Rs. 550. On the basis of the information supplied by one importer, the landed cost ex duty is Rs. 443, and the measure of protection required would therefore be Rs. 107 per ton. But on the basis of the landed cost ex duty as given by the Steel Controller, which is Rs. 384 per ton, the measure of protection for the cotton baling hoops would be Rs. 166 per ton. Before making our recommendation about the exact amount of protection that must be given to the domestic manufacturers, there is one important factor which must be taken into consideration and we deal with this in the next paragraph.

Location of the J. K Iron and Steel Works.

22. The J. K. Iron and Steel Works are situated at Cawnpore. Billets have to be transported from Calcutta to Cawnpore, and the finished hoops have to be sent back from Cawnpore to Calcutta. The railway freight for billets comes to Rs. 45 per ton of hoops produced

and the railway freight on finished hoops comes to Rs. 38 per ton. The total railway freight involved is therefore Rs. 83 per ton of hoops. The main producers of billets are near Calcutta and the consumers of hoops are all practically concentrated round about Calcutta. Under these circumstances, there is no justification for the location of the hoop factory at a place which involves an unnecessary railway freight of Rs. 83 per ton which adds materially to the cost of the finished product. Besides these items of railway freight, there are also other items of freight on coal and miscellaneous stores, on which there will be a saving if the factory were situated at or near Calcutta. Whatever might have been the justification for keeping this factory at Cawnpore during wartime, there is no justification for this at present. If the continuance of this factory at Cawnpore were to be presumed, we would have unhesitatingly rejected the request for protection, because there cannot be any possible justification for imposing on the cosumer of jute baling hoops an additional cost of Rs. 83 per ton. Our recommendations contained in the following paragraphs are based on the assumption that the factory would be removed from Cawnpore. The J. K. Iron and Steel Works have agreed that they would take immediate action to transfer the works either to Asansol or to Calcutta. Either of these places would be suitable from the point of view of the supply of raw materials and the off-take of the finished product. The removal of the works must be carried out on a definite plan. We have been told that the Company has already started negotiations for the purchase of land and electric power either at Calcutta or at Asansol. It should go into production in one of these places not later than the 31st December 1947.

Subsidy to cover railway freight.

23. With a view to making hoops available at a reasonable price for the jute industry, we think that Government ought to give a temporary subsidy to bring down the cost of the hoops. We understand that with a view to stabilizing steel prices, the Iron and Steel Controller has built up an Equalisation Fund which is made up of the difference between the selling price of steel articles and the retention price allowed to the manufacturers. It would be reasonable to suggest that the benefit of this Fund should partly go to the development of an important auxiliary steel industry like the hoop industry. We, therefore, recommend that the J.K. Iron and Steel Company should be given a subsidy to cover the actual railway freight on steel billets from Calcutta to Cawnpore and on hoops from Cawnpore to Calcutta. From the information available to us at present the railway freight under these two items works out at Rs. 83 per ton of hoop produced. This subsidy is to be given to the Company on their production at Cawnpore only up to the 30th June 1947. We expect that on or before this date the Company should have made all the arrangements for shifting the plant to the new production centre. The subsidy should be a

charge on the Equalization Fund. If for any reason it is found that this charge cannot be borne by the Equalisation Fund, we recommend that the subsidy should then come from the general revenues. The rate of protective duty which we recommend in paragraph 25 will bring a substantial additional revenue to Government from imports of cotton baling hoops as there would be considerable imports of these hoops during the period of about two and a half years for which protection is recommended. Imports of at least 30,000 tons of cotton baling hoops may be expected during this period, and the extra revenue receipts resulting from the increase in duty to 30 per cent will on this basis be about Rs. 24 lakhs. The amount of subsidy involved will be about Rs. 5 lakhs based on an estimated production of 6,000 tons of hoops at Cawnpore for a period of about nine months from October 1946, when our recommendation may be expected to take effect, to June 1947.

Fair selling price.

24. If our recommendation for the grant of a subsidy to cover railway freight for the J.K. Iron and Steel Company is accepted, the effective fair selling price for jute baling hoops will be Rs. 512 minus Rs. 83, *i.e.*, Rs. 429 f.o.r. Calcutta. No freight subsidy is recommended in the case of the Mysore Iron and Steel Works, and therefore the fair selling price for cotton baling hoops will be Rs. 550 per ton f.o.r. consuming centres.

Protective duty recommended.

25. The landed cost ex-duty of jute baling hoops is expected to be Rs. 333 per ton. The difference between the effective fair selling price of Rs. 429 per ton and the landed cost ex duty of Rs. 333 per ton is Rs. 96 per ton. A protective duty of 28·8 per cent is therefore indicated. In the case of cotton baling hoops, according to the information given by the importers, the landed cost is Rs. 443 per ton; the fair selling price being Rs. 550 per ton, the difference is Rs. 107 per ton and a duty of Rs. 24·2 per cent is indicated. If the information given by the Iron and Steel Controller regarding the landed cost is correct, then the landed cost ex duty will be Rs. 384 per ton. The fair selling price being Rs. 550 per ton, the difference is Rs. 166 per ton and a duty of 43·2 per cent is indicated. We recommend the imposition of a protective *ad valorem* duty of 30 per cent on all baling hoops imported from the U.K. to remain in force up to the 31st March 1949. With regard to cotton baling hoops it is difficult to predict with accuracy the effect of 30 per cent *ad valorem* duty. If the importers' figures of c.i.f. prices are to be accepted, the duty must be considered to be high. On the other hand, if the Steel Controller's information regarding the c.i.f. prices is correct, the duty is rather low. If the importers' figure of c.i.f. price turns out to be correct, the extra duty over and above what would be necessary will be 5·8 per cent *ad valorem*. Though the production of the Mysore Iron and Steel

Works is expected to be only 3,500 tons in the first year, it is expected to go up to about 7,000 tons by the third year. Apart from this, we expect that an adequate measure of protection to the hoop industry will stimulate further production to meet the home demand. In view of the fact that the production of hoops for cotton baling is an essential ancillary to the premier national industry of the country, *viz.*, the cotton textile industry, it is worth while giving all possible encouragement for the building up of this industry in the country. We are aware of the fact that, unlike jute, cotton has to compete in the international market and that any factor which goes to increase the price of cotton will handicap its exports, and it is possible that a part of the incidence of the higher cost of baling may fall on the grower of cotton through somewhat lower prices being offered for raw cotton. Though there is small likelihood of large scale exports of raw cotton in the near future, the demand for cotton goods in the internal market is expected to remain heavy and the price of raw cotton may be expected to be sustained for some time, the extra burden likely to be passed on to the cotton grower will be inappreciable. The duty of 30 per cent in the case of the cotton hoops will give ample protection so long as the c.i.f. price of cotton baling hoops does not fall below Rs. 415. We recommend that if the c.i.f. price of jute baling hoops falls below Rs. 300 per ton and of cotton baling hoops below Rs. 400 per ton, appropriate action should be taken under section 4 (1) of the Indian Tariff Act, 1934, to maintain the measure of protection recommended by us on the basis of the fair selling price estimated above.

Supply of billets.

26. We have already stated that the re-roller is not ordinarily expected to manufacture the billets and that these will have to be supplied by the main producers of steel in India or from imported billets. During the war under the system of steel control, billets have been supplied to re-rollers by the Steel Controller. The quantities supplied to the various categories of re-rollers depended on the relative essentiality of the products. Considering the fact that steel hoops are an essential, if small, requirement of two of the main industries of India, namely, the jute industry and the cotton industry, we consider that in the national interests hoops should be manufactured in the country itself and dependence on imports must be avoided. This argument is reinforced in the case of jute baling hoops by the fact that the indigenous manufacturer has the capacity to produce all the requirements of the jute industry provided the necessary quantity of billets is supplied. We recommend that the Government should undertake the responsibility of supplying the billets to the hoop industry. It is not possible for us to indicate the source from which Government may obtain the billet supply. We think it should be possible to get the required quantity of billets from the main steel producers in the country, though we have not at our disposal sufficient data to enable us to decide

whether they have a surplus quantity of billets for supply to re-rollers. We understand that this question has been examined by the Steel Panel appointed by the Government of India. In any case the steel industry in India having been built up with State help involving subsidies and protective duties, it would be reasonable to impose upon the main steel producers an obligation to supply a stated quantity of billets for re-rollers. The maximum quantity of billets required for producing 12,000 tons of hoops is 14,000 tons. We recommend that Government should undertake the responsibility of supplying the necessary quantity of billets at Cawnpore so long as production is carried on there subject to the proviso that no billets should be supplied at Cawnpore after the 30th June 1947. Thereafter the Government should resume the supply of billets at the new production centre from the date of commencement of production there up to the 31st March 1949. The billets should be supplied at Rs. 160 per ton f.o.r. Calcutta. For the manufacture of cotton baling hoops at Bhadravati which expects to produce 3,500 tons of cotton baling hoops in the first year, about 4,200 tons of billets will have to be supplied. We have been told by the Mysore Iron and Steel Works that after the end of the first year they would be in a position to produce their own billets. We therefore recommend that the Mysore Iron and Steel Works also should be supplied up to 4,200 tons of billets until July 1947 at Rs. 160 per ton f.o.r. port.

Continuance of steel control: Period of control.

27. For the successful functioning of the scheme of protection and assistance that we have recommended it would be necessary to continue the steel control for some time, at least so far as it is required to give effect to our recommendations. We recommend that such control should be continued until 31st December 1947 when the J. K. Iron and Steel Works should be in a position to commence production at Calcutta or Asansol. During the period of the removal of the factory from Cawnpore and its re-erection at the new site, there would naturally be no production of jute baling hoops. In view of the information that has been given to us regarding the stock position, this should not create any difficulty. We were told by the representative of the Jute Mills Association that the mills carry a stock of over 9 months' requirements. The J. K. Iron and Steel Co., had 3,420 tons of steel hoops in stock on the 15th April 1946. With these stocks and with the further increased production under the scheme suggested by us, it should be possible to meet the country's demand until the J. K. Iron and Steel Works go into production at the new centre. The import of jute baling hoops should be allowed only on licence up to the limit of the quantity that may be found to be absolutely necessary after taking into account the domestic stock and supply position, and, of course, the need for maintaining a minimum level of stocks. The import of cotton baling hoops also during the control

period should be allowed only on licence with due regard to the requirements of the country.

Price of hoops to consumers.

28. The price of hoops at present charged to the consumers is Rs. 770 per ton f.o.r. port for jute baling hoops and Rs. 900 per ton f.o.r. port for cotton baling hoops, if the supplies are made from producers and Rs. 935 per ton if the supplies are made from controlled stock holders. If our recommendations are accepted, the consumers should get jute baling hoops at Rs. 429 per ton f.o.r. port and cotton baling hoops at Rs. 550 per ton f.o.r. port. Government may decide the date from which the new prices should be brought into operation.

Quality of the domestic product.

29. The Indian Jute Mills Association attaches great importance to the quality of hoops to ensure (*a*) safety against bursting in the operation of baling and (*b*) minimum volume of space for transport. They complain that a number of mills have received claims for excess freights on account of the bales being over the dead-weight measurement. In their written memorandum the Association had stated that though difficulties had been experienced during the last few years, it was not possible to state definitely that these were caused by indigenous hoops. During the oral examination their representative was more positive and expressed dissatisfaction with the quality of the indigenous product. It would appear that jute exporters got a complaint from Australia that dock workers refused to handle their jute bales on the ground that some of the bales burst thereby involving risk. It has not been established that these bales were pressed with Indian-made hoops. On receipt of this complaint the Association brought the matter to the notice of the Iron and Steel Controller. Thereupon the Steel Commissioner had a conference with the representatives of the Association and in consultation with them prescribed specifications for the jute baling hoops. The Association agreed to these specifications. They now state that as a result of experience they are not satisfied with the existing specifications. These specifications are stated to be below the standard adopted in the United Kingdom. On making enquiries we found that there are no prescribed British standard specifications for jute hoops. The specifications are usually furnished by the buyer. If the Indian jute baling hoops are made to prescribed specifications, we do not see any reason why they should not prove as satisfactory as the British-made hoops. The J. K. Iron and Steel Company representative informed the Board that it would be possible for his works to manufacture the hoops to prescribed specifications. We therefore recommend that steps should be taken to prescribe specifications for the jute baling hoops by a competent authority.

30. The Bombay Millowners' Association and the Indian Central Cotton Committee have said in their memoranda that the

quality of cotton baling hoops is reported to be generally satisfactory though a few mills and factories have reported dissatisfaction and a number of burstings. In these cases also it is not definitely stated that the hoops used were of Indian manufacture. We recommend that in consultation with some of the leading importers and consumers, specifications should be prescribed also for the cotton baling hoops.

Test certificate of quality.

31. Some arrangements will have to be made to ensure that the hoops leaving the works do in fact conform to the specifications prescribed. We understand that in the case of tested steel supplied by the Tata Iron and Steel Company, the Steel Corporation of Bengal and the Indian Steel and Wire Products, a Government Metallurgical Inspector testifies that the product conforms to the prescribed specifications. A similar arrangement should be made in the case of jute baling hoops and cotton baling hoops. If these arrangements are made, we do not see any reason why the Indian manufacturers should not be in a position to supply baling hoops of the required quality. According to the Iron and Steel Controller the quality of hoops made by the J. K. Iron and Steel Works is satisfactory.

Burden of protection.

32. We may now estimate the extent of burden of the protective duty that we have recommended on the consumers of baling hoops. Since baling hoops form an item in the cost of jute bags, raw cotton and finished cotton goods, it is necessary to ensure that any protection granted to the baling hoop industry does not impose any appreciable handicap on these consuming industries. Taking the case of jute baling hoops, one ton of hoops is necessary for baling about 1,100 bales of gunny bag. If the import of baling hoops were allowed on the existing *ad valorem* revenue duty of 12 per cent on Undited Kingdom imports, the cost per ton of baling hoops will be Rs. 371. The cost of hoops required for one bale will be about Re. 0–5–4. On the basis of a protective *ad valorem* duty of 30 per cent, the price of the jute baling hoops will be Rs. 431 per ton and the cost of hoops for one bale of gunny bags will be Re. 0–6–3. The increase in cost, therefore, will be less than Re. 0–1–0 per bale of gunny bags, valued at prices which cannot be considered to be a heavy burden on the jute industry.

33. With regard to cotton baling hoops, one ton of hoops is required for baling about 333 bales of cotton. At the existing level of duty, the cost per ton of hoops as given by one of the importing firms is Rs. 494. This means that the cost of hoops for one bale of cotton is about Rs. 1–7–9. With the duty at 30 per cent as proposed, the cost of hoops per ton will be Rs. 555 and per bale of cotton about Rs. 1–10–9. The increase in the cost of hoops involved by the rate of duty proposed will, therefore, be Re. 0–3–0 per bale of cotton. This cannot be considered to be a significant addition to

the cost of cotton. In this connection, one other factor should be remembered. Since most of the cotton bales are transported within the country itself, the hoops used for baling can be and are in fact used again. The real significance of this is that in the increase in the cost of Re. 0–3–0 per bale due to the increased cost of hoops, at least Re. 0–1–0 per bale would be recovered by the sale of second-hand hoops. The net burden on the cotton industry will therefore be about Re. 0–2–0 per bale. We are satisfied that neither in the case of the jute industry nor in that of the cotton industry can the increased duty be considered to impose a handicap or a real burden. It must also be remembered that the existing duty on imports from countries other than the United Kingdom is 24 per cent *ad valorem*. In the pre-war years, a considerable portion of the imports came from Belgium and certain other continental countries. Though there was a preferential duty of 12 per cent *ad valorem* in the case of the United Kingdom, the burden on the consumer must have been determined by the higher rate of duty. We are informed that there is no possibility of any imports of hoops from the continental countries for some time to come. In assessing the burden of the proposed 30 per cent *ad valorem* duty, the increased duty should properly be compared with the 24 per cent *ad valorem* duty. Considered from this point of view, it cannot be said that any undue additional burden will be imposed on the consuming industries by increasing the duty to 30 per cent *ad valorem*.

Future prospects of the industry.

34. The main factor to be taken into consideration in assessing the prospect of the baling hoop industry is the capacity of the manufacturer to produce hoops at a reasonable conversion cost. As we have already stated he cannot be held responsible for the cost of billets which is beyond his control. The future prospect of the industry should therefore be judged by the probable cost of conversion in the near future. We have allowed a conversion cost of Rs. 250 per ton in the manufacture of jute baling hoops. This is based on an estimated production of 5,000 to 6,000 tons per annum. The J. K. Iron and Steel Company's rated capacity is 12,000 tons per annum and if they are given the necessary billets, they should be in a position to manufacture this quantity. As the volume of production increases and more experience is gained, the cost of conversion will come down considerably. On the full production of 12,000 tons the cost of conversion should be well under Rs. 200 and the J. K. Iron and Steel Company should be in a position to reduce its costs to this level in the third year of the period of protection recommended by us. One other factor which will reduce the conversion cost is the saving that will be made in the railway freight on coal and the miscellaneous items of stores when the factory starts production at Calcutta or at Asansol. We have, however, allowed a uniform conversion cost of Rs. 250 for the whole period of protection in view of the fact that the company will have to go out of production during the period when they would be shifting from Cawnpore and

also on account of the extra expenditure that must necessarily be incurred in the removal and re-erection of the plant. When the conversion cost is reduced to Rs. 200 per ton, the fair selling price will compare favourably with the landed cost ex duty of Rs. 333 per ton. By the third year of the period of protection, the jute baling hoops industry should therefore be able to stand competition with the help of only a revenue duty on the basis of the existing c.i.f. price.

35. On their own estimate the conversion cost of cotton baling hoops for the Mysore Iron and Steel Works will be Rs. 204 per ton on a production of 80 per cent. of rated capacity and Rs. 164 per ton on a production of the full rated capacity. When these costs are achieved, the cotton baling hoop industry can withstand foreign competition without any difficulty. The Mysore Iron and Steel Works expect to produce about 3,500 tons in the first year, about 5,000 in the second year ending June 1943 and 6,500 to 7,000 tons in the third year ending June 1949.

36. If our anticipations prove correct, the baling hoop industry must be in a position to meet competition towards the end of the period of protection recommended by us. We recommend that a review of the industry should be made some time during the first quarter of 1949.

How far conditions laid down by Government are satisfied.

37. The J. K. Iron and Steel Company belong to the Juggilal Kamlapat group which plays an important part in the industrial activities of the country. The Company has shown initiative and enterprise in undertaking the production of baling hoops which involves high technical skill and has successfully produced baling hoops during the last few years. Though there is considerable scope for economies in several items of expenses as pointed out by us, it can be said that the Company is established and conducted on sound business lines. The Mysore Iron and Steel Works are owned by the Mysore Government who have shown commendable enterprise in the fostering and development of various indigenous industries. We have no hesitation in saying that these works are established and conducted on sound business lines.

38. In examining the future prospects of the industry, we have shown in a previous paragraph that there is every chance of the cost of manufacture being reduced considerably during the course of the next three years. We therefore come to the conclusion that having regard to the probable cost of manufacture in the near future, the industry is likely within a reasonable time to develop sufficiently to be able to carry on successfully without protection or State assistance.

39. The cotton textile industry and the jute industry are two of the major industries of the country. The supply of baling hoops is an essential and indispensable link in either of these industries.

Without an adequate supply of baling hoops it will be impossible to export the jute products or raw cotton, or to transport internally raw cotton and finished cotton goods. The extra burden that will fall on the consumer of baling hoops is almost negligible. For these reasons we consider it necessary to encourage the manufacture of steel hoops in India so that the country may become self-sufficient in the supply of an important product. It may therefore be said that in the national interest as well it is desirable to protect this industry.

Summary of Recommendations.

40. (1) The J. K. Iron and Steel Company should be given a subsidy to cover the actual railway freight on steel billets from Calcutta to Cawnpore and on hoops from Cawnpore to Calcutta, which at present works out at Rs. 83 per ton of hoop produced. This subsidy is to be given to the Company on their production at Cawnpore only up to the 30th June 1947. The subsidy should be a charge on the Equalization Fund built up by the Iron and Steel Controller. If for any reason it is found that this charge cannot be borne on the Equalization Fund, the subsidy should be met from the general revenues. (Paragraph 23.)

(2) A protective *ad valorem* duty of 30 per cent. should be levied on all imports of baling hoops from the United Kingdom. The duty should remain in force up to the 31st March 1949. (Paragraph 25.)

(3) If the c.i.f. price of jute baling hoops falls below Rs. 300 per ton and of cotton baling hoops below Rs. 400 per ton, appropriate action should be taken to increase the duty under section 4 (1) of the Indian Tariff Act, 1934. (Paragraph 25.)

(4) The Government of India should undertake the responsibility of supplying the necessary quantity of billets to the J.K. Iron and Steel Company at Cawnpore, so long as production is carried on there, subject to the proviso that no billets should be supplied at Cawnpore after 30th June 1947. Thereafter, Government should resume the supply of billets at the new production centre from the date of commencement of production up to the 31st March 1949. The billets should be supplied at Rs. 160 per ton f.o.r. Calcutta. (Paragraph 26.)

(5) The Mysore Iron and Steel Works should be supplied by the Government of India with billets up to a maximum of 4,200 tons until July 1947 at Rs. 160 per ton f.o.r. port. (Paragraph 26.)

(6) The iron and steel control should continue until the 31st December 1947 so far as it is necessary to give effect to our recommendations. The import of hoops should be allowed only on licence up to the limit of the quantity that may be found to be absolutely necessary after taking into account the domestice supply available. (Paragraph 27.)

(7) Government may decide the date from which new prices should be brought into operation under which consumers should get jute baling hoops at Rs. 429 per ton f.o.r. port and cotton baling hoops at Rs. 550 per ton f.o.r port. (Paragraph 28.)

(8) Steps should be taken to prescribe specifications for jute and cotton baling hoops in consultation with consumers and leading importers. (Paragraph 30.)

(9) A Government Metallurgical Inspector should issue test certificates that all jute baling hoops and cotton baling hoops going out of the works do conform to the standards prescribed. (Paragraph 31.)

(10) A review of the baling hoop industry should be made in the first quarter of 1949. (Paragraph 36.)

Acknowledgments.

41. The Board wishes to place on record its thanks to Dr. Madan, the Deputy Secretary, for having supervised the preparation of the case from start to finish, to Mr. Gonsalves, the Cost Accounts Officer, for having examined the figures of cost of production of the main producer, and to Messrs. Whittle, Black and Walshaw of the Department of Industries and Supplies for their very helpful co-operation and advice in a rather difficult case.

SHANMUKHAM CHETTY,
President.

C. C. DESAI,
Member-Secretary.

NAZIR AHMAD,
Member.

H. L. DEY,
Member.

B. K. MADAN,
Deputy Secretary.

(CAMP) OOTACAMUND, *The 29th May* 1946.

APPENDIX I.

Resolution of the Government of India, Department of Commerce (Tariffs), No. 218-T (55)/45, dated New Delhi, the 3rd November 1945.

In the statement on industrial policy issued by the Government of India on the 23rd April 1945, it was announced that pending the formulation of a tariff policy appropriate to the post-war needs and conditions of the country and the establishment of permanent machinery for the purpose, Government would set up machinery for investigating claims from industries, which have been started or developed in war time and which are established on sound lines, to assistance or protection during the transition period. A press communiqué issued on the same date invited industries to address their claims to the Secretary to the Government of India in the Department of Commerce.

2. Several industries have accordingly applied for assistance or protection, and on a preliminary examination of their claims, the Government of India have come to the conclusion that applications submitted by the following industries call for a detailed examination :—

(i) non-ferrous metals, including antimony ;
(ii) grinding wheels ;
(iii) caustic soda and bleaching powder ;
(iv) sodium thiosulphate, sodium sulphite anhydrous, sodium bisulphite ;
(v) phosphates and phosphoric acid ;
(vi) butter colour, aerated water powder colour ;
(vii) rubber manufactures ;
(viii) fire hose ;
(ix) wood screws ;
(x) steel hoops for baling.

Other applications are under the consideration of Government, and further action in their case will be taken in due course.

3. In addition to the industries which have applied for assistance or protection, there are certain industries the starting of which was considered essential by the Government of India under conditions created by the war. Early in 1940, Government announced that specified industries promoted with their direct encouragement during war time might feel assured that, if they were conducted on sound business lines, they would, by such measures as Government might devise, be protected against unfair competition from outside India. In accordance with this decision, the following industries have been given an assurance of protection against unfair competition after the war :—

(i) bichromates ;
(ii) steel pipes and tubes up to a nominal bore of 4 inches ;
(iii) aluminium ;
(iv) calcium chloride ;
(v) calcium carbide ;
(vi) starch.

Of these industries, only those engaged in the manufacture of bichromates, calcium chloride and starch have so far applied for assistance or protection during the transition period. The Government of India consider that the applications submitted by these three industries also call for immediate investigation.

4. For the purpose of these and any subsequent investigations, the Government of India have decided to set up a Tariff Board for a period not exceeding two years, in the first instance. The Board will consist of—

PRESIDENT :

Sir R. K. Shanmukham Chetty, K.C.I.E.

" MEMBERS :

Mr. C. C. Desai, C.I.E., I.C.S.

Prof. H. L. Dey, D.SC. (Lond.).

The Board will include one more Member whose name will be announced shortly. Mr. Desai will act as Secretary to the Board in addition to his duties as Member.

5. The Tariff Board is requested to undertake, in such order as it thinks fit, the investigation of claims put forward by the industries specified in paragraphs 2 and 3 above. In the case of each industry the Board will, after such examination as it considers necessary, report whether the industry satisfies the following conditions :—

(1) that it is established and conducted on sound business lines ; and

(2) (*a*) that, having regard to the natural or economic advantages enjoyed by the industry and its actual or probable costs, it is likely within a reasonable time to develop sufficiently to be able to carry on successfully without protection or State assistance ; or

(*b*) that it is an industry to which it is desirable in the national interest to grant protection or assistance and that the probable cost of such protection or assistance to the community is not excessive. Where a claim to protection or assistance is found to be established, i.e., if condition (1) and condition (2) (*a*) or (*b*) are satisfied, the Board will recommend—

(i) whether, at what rate and in respect of what articles, or class or description of articles, a protective duty should be imposed ;

(ii) what additional or alternative measures should be taken to protect or assist the industry ; and

(iii) for what period, not exceeding three years, the tariff or other measures recommended should remain in force.

In making its recommendations the Board will give the weight to the interests of the consumer in the light of the prevailing conditions and also consider how the recommendations affect industries using the articles in respect of which protection is to be granted. Since relief, to be effective, should be afforded without delay, the Board is requested to complete its enquiries with all possible expedition and to submit a report as soon as the investigation of the claim of each industry is concluded.

6. The headquarters of the Board will be at Bombay, but it will visit such other places as it thinks necessary for purposes of its enquiries. Firms and persons interested in any of these industries, or in industries dependent on the use of the products of these industries, who desire that their views should be considered, should address their representations to the Secretary to the Board.

7. Any claims hereafter received from other industries which in the opinion of the Government of India are suitable for examination by the Board will be referred to the Board in due course for examination.

8. The Government of India trust that Provincial Governments and Administrations will afford the Board all the assistance which it may require and will comply with any request for information which may be addressed to them by it.

N. R. PILLAI,
Secretary.

APPENDIX II.

List of producers, consumers and importers who submitted written evidence to the Board.

Producers—

(1) The J. K. Iron and Steel Company, Limited, Kamla Tower, Cawnpore.

(2) The Mysore Iron and Steel Works, Bhadravati (Mysore).

(3) The India Steel Rolling Mills, Negapatam.

Consumers—

(1) The Indian Jute Mills Association, Calcutta.

(2) The Cochin Chamber of Commerce, Cochin.

(3) The Indian Central Cotton Committee.

(4) The Mill-owners' Association, Bombay and Ahmedabad.

Importers—

(1) Messrs. McGregor and Balfour, Limited, 11, Clive Street, Calcutta.

(2) Messrs. Greaves Cotton & Co., Ltd., 1, Forbes Street, Fort, Bombay.

(3) Messrs. W. T. Suren & Co., United India Buildings, Sir Phirozshah Mehta Road, Bombay.

(4) Messrs. Volkart Brothers, Volkart Building, Graham Road, Ballard Estate, Bombay.

(5) Messrs. Grahams Trading Company, Limited, 16, Bank Street, Bombay.

(6) Messrs. Podar Trading Company, Limited, Podar Chambers, Parsee Bazar Street, Bombay.

(7) Messrs. Padamsey Premji & Co., 113, New Chinch Bunder, Bombay.

(8) Messrs. Lalji Doongershy & Co., Tejoo Kayu Building, Chinch Bunder Road, Bombay.

APPENDIX III.

List of witnesses examined by the Board and the dates on which they were examined.

Name.	Date.
Producers—	
(1) Mr. S. M. Bashir,	
(2) Mr. S. Mahalingam, Representing the J. K. Iron and Steel Company, Limited, Cawnpore ..	9th April 1946.
(3) Mr. P. R. Balakrishnan,	
(4) Mr. D. V. Krishna Rao, Representing the Mysore Iron and Steel Works, Bhadravati (Mysore State) ..	9th April 1946.
Consumers—	
(5) Mr. J. R. Walker,	
(6) Mr. M. P. Birla, Representing the Indian Jute Mills Association, Calcutta	10th April 1946.
(7) Mr. C. P. Greuter, Representing the Cochin Chamber of Commerce	10th April 1946.
Importers—	
(8) Mr. J. S. Stewart, Representing Messrs. McGregor and Balfour, Limited, Calcutta	10th April 1946.

APPENDIX IV.

Statement showing the quantity, value and average value per ton of imports of iron or steel hoops and strips into India since 1936–37.

		1936–37.	1937–38.	1938–39.	1939–40.	1940–41.	1941–42.	1942–43.	1943–44.	1944–45.	1945–46 (eight months, from April to November 1945).
I. Quantity of imports from—											
(*a*) Private—											
1 U.K.	Tons (000)	15·17	19·17	9·22	14·39	14·97	5·89	0·45	0·44	0·03	1·06
2 Germany	,,	6·36	5·68	2·59	0·95	..	..	..	..	Information available.	not available.
3 Belgium	,,	10·67	11·81	5·85	6·07	3·37	0·05	..	..		Do.
4 France	,,	2·30	3·99	1·59	1·91	0·02	..	..	..		Do.
5 Japan	,,	1·46	2·02	3·25	5·47	8·43	3·30	..	..		Do.
6 U.S.A.	,,	2·80	2·45	0·92	2·23	18·30	7·25	10·03	5·34	5·78	2·76
7 Other countries	,,	2·44	3·38	0·99	2·15	0·68	0·16	0·01	0·04	0·03	0·01
Total ..	,,	40·32 *	48·50	24·41	33·17	45·77	16·65	10·49	5·82	5·84	3·83
(*b*) Government stores—											
1 U.K.	Tons (000)	0·01	0·01	0·04	0·03	0·15	..	0·01	..	..	Information not available.
2 U.S.A.	,,	..	..	..	..	..	..	0·38	2·93	10·59	Do.
3 Other countries	,,	0·01	..	..	..	..	..	..	..		
Total ..	,,	0·02	0·01	0·04	0·03	0·15	..	0·38	2·93	10·59	
Grand total ..	,,	40·33 *	48·51	24·45	33·20	45·92	16·65	10·87	8·75	16·43	

* (1) Excluding imports into Burma.
(2) The totals are corrected to two decimals from the original totals.

Statement showing the quantity, value and average value per ton of imports of iron or steel hoops and strips into India since 1936–37—cont.

		1936–37.	1937–38.	1938–39.	1939–40.	1940–41.	1941–42.	1942–43.	1943–44.	1944–45.	1945–46 (eight months, from April to November 1945).
II. Value of imports from—											
(*a*) Private—											
1 U.K.	Rs. (Lakhs)	23·09	38·25	20·45	31·73	45·46	21·57	1·57	1·51	0·19	3·81
2 Germany	,,	8·47	10·93	5·25	2·08	..	..	..	..	Information not available.	
3 Belgium	,,	11·78	19·05	10·03	12·72	11·46	0·18	..	..	Do.	
4 France	,,	2·10	3·54	3·07	2·98	0·03	..	..	..	Do.	
5 Japan	,,	1·66	4·07	5·84	13·44	26·41	12·97	..	..	Do.	
6 U.S.A.	,,	3·75	3·76	1·93	4·69	60·45	25·73	43·33	23·79	27·79	10·20
7 Other countries	,,	3·04	6·11	1·98	5·58	2·10	0·37	0·01	0·13	0·06	0·02
Total ..	,,	52·60 *	85·71	48·55	73·22	145·91	60·82	44·91	25·43	28·04	14·03

(b) Government stores—											
1 U.K.	Rs. (Lakhs)	0·02	0·01	0·13	0·10	0·78	..	0·04	..	..	Information not available.
2 U.S.A.	,,	..	..	..	..	..	..	1·78	11·55	43·61	Do.
3 Other countries	,,	0·01	..	0·01	..	..	..	..	0·01		
Total ..	,,	0·03	0·01	0·14	0·10	0·78	..	1·81	11·56	43·61	
Grand total ..	,,	52·63 *	85·72	48·69	73·33	146·69	60·82	46·72	36·99	71·65	
III. Average value per ton of imports from—											
(a) Private—		RS. A.	RS. A.	RS. A.	RS. A.	RS. A.	RS. A.	RS. A.	RS. A.	RS. A.	RS. A.
1 U.K.		152 3	199 9	221 15	220 10	303 12	366 1	350 9	342 7	615 9	358 1
2 Germany		133 5	192 6	202 15	218 14	..	..	..	..		
3 Belgium		110 6	161 6	171 6	209 8	340 3	352 1	...	..		
4 France		91 6	88 15	192 15	156 4	202 10	..	..	..		
5 Japan		113 7	202 1	179 14	245 13	313 7	392 13	..	..		
6 U.S.A.		134 7	153 9	209 7	210 1	330 5	354 13	431 12	446 0	480 12	369 5
Total Imports ..		130 7	176 12	198 14	220 12	318 13	365 4	428 4	436 12	479 15	366 2
(b) Government stores—											
1 U.K.		263 14	190 0	327 15	359 5	538 13	..	733 3	..		
2 U.S.A.		..	..	..	..	..	..	472 2	394 12		
Total Imports ..		193 0	190 0	333 10	359 5	538 13	..	475 9	394 13		

* (1) Excluding imports into Burma.
(2) The totals are corrected to two decimals from the original totals,

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MINISTRY OF COMMERCE

REPORT OF THE INDIAN TARIFF BOARD

ON THE

COTTON YARN AND CLOTH PRICES

BOMBAY
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REPORT ON COTTON YARN AND CLOTH PRICES.

Control of cloth and yarn prices.

1. (a) *Its history.*—At the outbreak of the war in 1939, prices of cotton manufactures began to rise. This upward movement was moderate during the first year of the war, the Economic Adviser's index number for wholesale prices of cotton manufactures having risen from 100 during the week ending 19th August 1939 (base) to 113 during the week ending 17th August 1940. Thereafter, prices began to rise rapidly, and during the week ending 16th August 1941, the index number stood at 197. During the next 10 months the movement was again moderate, the average index number for June 1942 being 212. In the meantime, towards the close of the year 1941, Japan had entered the war and there was consequently a cessation of imports of cloth and yarn from that country. The effect of this factor on the prices of cotton manufactures became noticeable for the first time in July 1942, the index number for that month having shot up to 242. Thereafter, prices rose rapidly from month to month. The index number rose to 300 in October, 339 in November and 414 in December. A further series of advances in prices began in February 1943, when the index number was 427. By April 1943, the number went up to 469 and by June 1943 to 513. At this stage Government felt that there was an urgent necessity of controlling the prices of cotton yarn and cloth. After prolonged discussions with the representatives of the industry, the Cotton Cloth and Yarn Control Order was promulgated in June 1943, whereby price control was introduced. The first step to reduce prices was taken in August 1943, when, with the concurrence of the industry's representatives, the ex-mill ceiling prices of 12 varieties of cloth were fixed at about 40 per cent. below the market prices then ruling, and the mills were asked to charge these reduced prices. This measure, however, was not comprehensive ; its effectiveness depended on the good faith of the mills, because there was nothing to prevent them from continuing to charge such prices as they liked. In December 1943, therefore, control prices were fixed for all varieties of cloth and yarn for the first time and an order was issued to the mills to stamp these prices on the cloth pieces and yarn bundles. Successive reductions in these control prices were made by Government with the concurrence of the Industry's Committee of the Textile Control Board in March 1944, June 1944, September 1944, February 1945 and November 1945. The reductions made during the years 1943-45 were appreciable. The Economic Adviser's index number for cotton manufactures came down from the peak of 513 in June 1943 to 262 in December 1945, indicating that the prices had been reduced on an average by about 50 per cent. from the peak level. A new schedule of realisation multipliers for fixing grey cloth prices based on the overall reduction of prices mentioned above was introduced from 1st February 1946. The ex-mill prices based upon this schedule remained unchanged till 1st December 1947. The ex-mill ceiling prices for yarns were revised on 6th April 1946, which also remained unchanged till 1st December 1947. On 19th January 1948, there was a considerable relaxation in the control over yarn and cloth, and the fixing of prices was left to the industry, but the stamping of prices of yarn and cloth continued. The industry issued a new schedule, which showed increases in price by 6¼ per cent. in respect of superfine, 12½ per cent. in respect of medium and fine and 25 per cent. in respect of coarse varieties.

On 24th April, control over the prices and distribution of yarn and cloth was entirely lifted. And there was a sharp rise in prices which were reported to be 50 to 200 per cent. higher than the control prices fixed and stamped by the industry after 19th January 1948.

(b) *Basis of price adjustments.*—It is important to note that the control prices for cotton yarn and cloth during the period in question were not based upon any adequate cost investigation. To start with, the prices of the principal categories of yarn and cloth then ruling in the market were taken as the base prices. These base prices were progressively reduced from time to time as a result of discussions between Government and the Industry's Committee of the Textile Control Board. The prevailing cotton prices, changes in wage levels and taxation rates, variations of profits as disclosed by the published balance sheets of cotton mills and, more generally, the need for affording relief to consumers and for counteracting inflationary forces, were the factors considered in these discussions regarding alteration of prices. Thus, although the prices of cotton yarn and cloth had been reduced to an appreciable extent from their peak levels, neither Government nor the public had any means of judging whether these reductions were adequate and whether the control prices were not still excessive.

(c) *Industry's demand for an increase in the prices of cloth and yarn.*—The reduction in the prices of yarn and cloth made in November 1945 was heavier in the case of coarse and medium varieties of cloth than in that of fine and superfine varieties, mainly because the prices of Indian raw cotton had declined during the months of September, October and November 1945. Soon, however, the prices of Indian raw cotton began to rise and the Industry's Committee asked for an increase in the ceiling prices of coarse and medium qualities of yarn and cloth. Moreover, under the new Factories Act of 1946, the hours of work for factory workers were reduced from 9 to 8 hours per shift with effect from 1st August 1946. The Industry's Committee of the Textile Control Board argued that a reduction in working hours without a corresponding reduction in wages would automatically increase the manufacturing costs and that, with such increased costs, the manufacture of coarse and medium varieties of yarn and cloth at the then existing level of ceiling prices would become unremunerative. It was stated by the Committee that unless the prices of coarse and medium yarn and cloth were increased, the manufacturers would be compelled to change over to finer counts, which had become more remunerative, and that such a shift would result in a fall in the overall production of cloth. At the same time, the Committee offered a small reduction in the prices of the fine and superfine varieties. Government, however, considered it inopportune to make any upward revision in the prices of coarse and medium cloth. A suggestion was made to the industry for the working of a scheme of equalisation fund, whereby coarse and medium cloth production could be subsidised by a levy on fine and superfine varieties of cloth. The Industry's Committee, after prolonged discussion, found such a scheme undesirable and unworkable and adhered to the original demand for an increase in the prices of coarse and medium varieties of cloth. As public opinion in the country had been prejudiced by the high profits made by the industry during the latter part of the war, Government thought it undesirable to sanction any increase in the prices of

coarse and medium yarn and cloth without a thorough inquiry into the cost of production. They, therefore, appointed an *Ad Hoc* (Departmental) Committee on 1st March 1947 to review the structure of yarn and cloth prices and recommend measures for an increase in production. This Committee formulated a " Standardisation Scheme ", whereby it was proposed to increase the output by reducing the types and varieties of cloth and yarn produced by the mills. It was also proposed that the average counts produced by the mills should be lowered by approximately 10 per cent. It was expected that by lowering the average counts of yarn spun by the mills, production of cloth could be increased by about 800 million yards per year. The *Ad Hoc* Committee also recommended a revision in the structure of cloth and yarn prices. It was proposed that the prices of coarse and medium counts of yarn up to 36's should be increased, but that those of higher counts from 40's upwards should be reduced by varying amounts. The proposed increases in the prices of coarse and medium varieties of cloth and yarn were meant to compensate for the increase in the prices of Indian raw cotton and in wages, so that the production of coarse and medium cloth and yarn might be made remunerative and thereby the tendency of the mills to go ' filer ' might be checked. Before taking a decision on these recommendations of the *Ad Hoc* Committee, Government referred the Committee's Report to the Commodities Prices Board, for its comments. The Board expressed the view that an adequate case had not been made out for an increase in the price of coarse and medium cloth and yarn, but suggested that, if any adjustments were found to be necessary to make coarse and medium cloth and yarn sufficiently remunerative, it should be brought about by instituting an equalisation fund, whereby a levy might be put on fine and superfine varieties and its proceeds utilised to subsidise the production of coarse and medium varieties.

(d) *Reference to the Tariff Board.*—After considering the Reports of the *Ad Hoc* Committee and the Commodities Prices Board, Government came to the conclusion that the matter required a further investigation. Accordingly, the case was referred to the Tariff Board in Resolution No. 88(T)-Tex.1|47, dated 17th November 1947, of the Ministry of Industry and Supply, Government of India. Soon afterwards, however, Government decided on a policy of gradual decontrol of commodities, and in pursuance of that policy, they announced on 19th January 1948 their decision to make considerable relaxation in the control over cloth and yarn. The standardization scheme, as originally contemplated, was not enforced. The fixation of ex-mill and retail prices was left to the industry, but these were stamped on yarn and cloth. The equalisation fund was closed. The system of cloth quota holders was abolished, and the distribution of cloth was restored to normal trade channels. Although the fixation of prices was now left to the industry itself, Government decided that the Tariff Board inquiry into the prices of cotton cloth and yarn should continue, with a view to enabling Government and the public to satisfy themselves that the consumer was not charged a higher price for cloth than was justified. A further step in the decontrol of cloth and yarn was taken on 24th April 1948, when Government decided that, with immediate effect, the stamping of ex-mill and retail prices of cloth should be discontinued. The regulations regarding the movements of cloth and the tex-marking were, however, continued. Control over distribution of yarn was also discontinued.

Control over the distribution of mill stores was, however, retained, except as regards dyes and hydro-sulphide of soda, which were allowed to move freely through normal trade channels. It will thus be seen that the control over distribution and prices of cloth and yarn, which had been introduced in December 1943, was now almost completely lifted.

Terms of reference.

2. (a) The original terms of reference to the Board, as contained in Government of India, Ministry of Industry and Supply, Resolution No. 88(T)-Tex.1|47, dated 17th November 1947, were as follows :—

" (i) To inquire into the cost of production of the various types of cloth and yarn produced, and to recommend fair ex-mill prices to be paid for cloth and yarn, with special reference to the changes created by the introduction of the Standardization Scheme.

In making their recommendations, the Board will keep in mind the desirability of maintaining the production of all mills at the maximum level, while at the same time ensuring that the profits of the more efficient units will not thereby become excessive. If the Board consider that it would be impracticable to settle a level of prices which would balance these two requirements, they may consider whether prices cannot be kept down to reasonable levels with a subsidy or similar relief to sections or units of the industry whose production cannot otherwise be maintained. If special circumstances apply to mills engaged in the production of yarn alone, the Board will take those circumstances into consideration when making their recommendations.

(ii) To advise on the adjustment to be made from time to time to the ex-mill prices recommended by them for cloth and yarn, so as to allow for fluctuations in the prices of raw cotton and in other elements of the cost of production.

(iii) In the event of subsidy or other relief being recommended for certain sections or units of the Industry under (i) above, to suggest ways and means of finding the necessary funds.

(iv) To recommend in what forms the co-operation of labour should be secured in order to increase production and eliminate waste or leakage.

(v) To advise Government generally on the existing system of control on production and distribution of cloth and yarn, and on its continuance."

(b) Consequent on the decision of Government on 19th January 1948 to make considerable relaxation in the control of cotton cloth and yarn, the details of which have been mentioned earlier, the scope of the Board's inquiry was narrowed. In the first place, the estimate of fair ex-mill prices of cloth and yarn was no longer required to be related to the Standardization Scheme. Secondly, the Board was not now required to advise Government generally on the control of production and

distribution of cloth and yarn, and its continuance. This necessitated a change in the Board's terms of reference. The revised terms of reference were notified in the Commerce Ministry's Resolution No. 28-T(46)/47, dated 6th March 1948. The revised terms are as follows :—

" (i) To enquire into the cost of production of the various types of cloth and yarn produced and to estimate fair ex-mill prices of cloth and yarn ; and

(ii) To devise a suitable method for necessary adjustments from time to time in the fair ex-mill prices of cloth and yarn so as to allow for major fluctuations in the prices of raw cotton and other elements of cost of production."

Purpose and scope of inquiry.

3. The purpose and scope of this inquiry must be interpreted with reference to the circumstances in which the inquiry was instituted. Those circumstances have been explained earlier. It will, however, be convenient to recapitulate them here. During the period from December 1943 to March 1947, the control prices of cloth and yarn were fixed practically on the basis of the estimates made by the Industry's Committee of the Textile Control Board. The *Ad Hoc* Committee recommended an increase in the prices of coarse and medium varieties and a reduction in those of fine and superfine varieties. The Commodities Prices Board, however, did not favour any such increase in the prices of the coarser and medium varieties but suggested that, if an increase was considered necessary, an equalisation fund should be instituted to subsidise the production of coarse and medium varieties by a levy on fine and superfine varieties. Subsequently, in January 1948, Government partially decontrolled cloth and yarn and left the fixation of prices to the industry itself. Some three months later, on 24th April 1948, the prices of cloth and yarn were completely decontrolled. There was immediately an enormous increase in the prices of yarn and cloth. In the meantime, six Bombay mills, *viz.*, Bombay Dyeing, Tata, Swadeshi, David, Edward and Simplex, announced that the prices at which they were selling their standard cloths in bulk to wholesale merchants were not more than 45 per cent. above the prices fixed on January 20, 1948 (*vide Sunday News of India, 9th May*, 1948). Government took a serious view of this extraordinary increase in prices immediately after decontrol. There were also complaints from the public practically throughout the whole country that the prices ruling after decontrol were excessively high and beyond the reach of the common people. Mill-owners in their turn replied that the ex-mill prices charged by them were fair and reasonable, that the prices charged in their fair price shops were not excessive and that if the retail prices actually paid by the consumers in the market had become excessively high, the millowners could not be held responsible for it. On the other hand, the representatives of cloth merchants and dealers stated that even during the period of partial decontrol from January to April 1948, many mills had been charging prices higher than the stamped prices, that quite a number of mills in expectation of decontrol had not stamped and released the cloth produced in the latter part of the control period, and that some mills at any rate had been selling cloth at different prices to different sets of customers. In the midst of these charges and counter-charges by the mills on the one hand and the merchants and dealers on the other, it

was extremely difficult for Government and the public to judge whether the prices charged at different stages of distribution were fair or excessive, and if they were excessive at some or all of the stages of distribution, who were the parties exactly responsible for it. The object of this inquiry is, therefore, to find out whether the prices fixed at different periods during control and those charged by the mills and distributors after decontrol have been fair to the producers and distributors on the one hand and to the consumers on the other. For this purpose, we have carried out a detailed investigation into the cost of production of certain principal categories of cloth and yarn at 16 representative mills located in different regions of the country. Our cost investigation covers three different periods : (i) January-June 1947, the latest period for which the details of cost could be collected from the audited accounts of the mills concerned, (ii) January 1948, when cloth and yarn prices were partially decontrolled and the fixation of prices was left to the industry itself, and (iii) April 1948 when control was lifted. We have framed a schedule of fair ex-mill prices of the principal categories of cloth and yarn for each of these three periods. The method of analysing cost and preparing estimates of fair ex-mill prices is explained at length later in the Report. It may be stated here that while the estimates for the first period are based upon the actual cost data collected from the audited accounts of the mills concerned, the estimates for the second and third periods bring the cost data of the first period up-to-date by making necessary adjustments for changes in the prices of raw cotton, stores and wages. We then compare the schedule of the *estimated* fair ex-mill prices with the schedule of the ex-mill prices as fixed by the Textile Commissioner in the first period, by the industry in the second period, and by the mills individually in the third period. In order to give a clear and complete picture, we have set down side by side our estimates of fair ex-mill prices and the ruling prices of different periods.

Method of enquiry.

4. On 19th December 1947, the Board issued a preliminary questionnaire to 59 mills all over the country, inquiring about the types of cotton cloth and yarn produced by them. This information was required to enable the Board to select a few mills for costing. In making the selection, the Board took into consideration the size of the mills as well as the types of cloth and yarn produced by them. There are more than 400 cotton textile mills in India. But, it was not feasible to cost all the mills, nor was it necessary to do so, in order to obtain data for estimating fair ex-mill prices of the principal categories of cotton cloth and yarn. It was enough for this purpose to select a few representative mills in each important zone of cloth and yarn production and investigate their actual costs and then adopt those costs as the basis for estimating fair ex-mill prices of cloth and yarn for the country as a whole. A few representative mills were, therefore, selected by the Board for the purpose of cost investigation. A general questionnaire was issued on 27th December 1947 to all interested parties. Replies were called for by 20th January 1948. A copy of this questionnaire is given in Appendix I. A press note was also issued on 29th December 1947, giving the Board's (original) terms of reference and inviting persons, who desired their views to be considered by the Board, to send their representations. On 19th January 1948, Government announced considerable relaxation in the control over cotton cloth and yarn. In view of this development,

the Board's (original) terms of reference needed revision. The revised terms of reference were notified by Government on 6th March 1948. The Board framed a new questionnaire and issued it on 10th March to the Mill-owners' Associations, Trade Unions, East India Cotton Association, Bombay Shareholders' Association, Chambers of Commerce, members of the All India Handloom Board, Directors of Industries, and a few prominent individuals known to have an intimate knowledge of the working of the cotton mill industry. The last date for the submission of replies was fixed as 8th April 1948. A copy of the revised questionnaire is given in Appendix II. On 18th March 1948, a press communique was also issued stating the revised terms of reference and intimating that a revised questionnaire was ready and could be had on application to the Office of the Board. A list of the Associations or persons who replied to the questionnaire or submitted memoranda will be found in Appendix III. Five mills were visited by the President and/or Members of the Board ; three in Bombay, one in Calcutta, and one in Madras. The details of these visits are given in Appendix IV. Copies of the cost estimates were sent to all the costed mills, and they were given an opportunity to discuss those cost estimates with the Board's Technical Adviser and Cost Accounts Officers. Only three mills, namely, Madhusudan and Raghuvanshi Mills, Bombay and Rajkumar Mills, Indore, availed themselves of the opportunity, and discussed the estimates with those officers in the Board's office on 22nd April, 23rd April and 10th May respectively. A public inquiry was held on 4th, 5th, 6th, 7th and 12th May 1948. As there were no recognised consumers' associations in India, the Board had some difficulty in selecting the consumers' representatives. After considering the matter carefully, the Board decided to invite four Members of the Constituent Assembly (Legislature) and one Member of the Bombay Legislative Assembly, as representatives of the consumers of cloth, and the Directors of Industries, Bihar and Madras, as representatives of handloom weavers to give evidence before the Board. A list of the Associations and persons, who were invited to attend the inquiry, is given in Appendix V, and a list of those who attended the inquiry and were examined is given in Appendix VI.

Basis of selection of the mills for costing.

5. There are at present about 400 cotton textile mills located in different parts of the country. Appendices VII (A) & (B) show the distribution of the cotton mills, classified by locality, number of spindles and number of looms. The mills vary widely in respect of size, efficiency, age of machinery and advantages in regard to supply of labour, raw material and stores and facilities for transport. They also differ in respect of management and financial facilities. Further, there is an enormous range of variety of yarn and cloth produced. It is, therefore, impossible to investigate the cost of production at all the mills in respect of all the different varieties of yarn and cloth that they manufacture. In a case of this nature, the most practicable method of procedure in costing is to select a few typical or representative mills so that their cost of production may be taken to cover a great majority, say, 80 to 90 per cent, of the mills in the country. The remaining 10 to 20 per cent may be regarded as infra-marginal or units below the average. Such representative mills should have an average economic size and a reasonable degree of efficiency. Their plant should be balanced and their machinery should be neither quite new nor very old. Their

workers should also possess an average measure of efficiency. So also with regard to management and availability of financial facilities. To be able to select representative mills in this sense, it would be necessary to obtain full statistical and economic data in respect of all the mills. But, unfortunately, such data are not available in respect of the majority of the mills in the country. In these circumstances, the Board proceeded to select the mills by the following method. First of all, the mills in the different zones were classified into groups according to the number of looms and spindles. From each zone, again, the largest group of mills was selected, which could be regarded as the representative group for that zone. Out of this group, again, two or three mills were selected with reference to the variety of cloth and yarn woven, availability of satisfactory cost data and fairly definite knowledge about their efficiency. On this basis, 18 mills were selected in the first instance. Of these 18 mills, however, one mill in Ahmedabad, namely, Silver Cotton Mills, had to be dropped because the accounts were kept in Gujarati and also because, after a preliminary examination, the data were found to be inadequate. This was substituted by another mill in the same centre. In the case of a second mill, namely, John Spinning & Weaving Mills, Agra, when our investigation had proceeded half way, the mill was sealed under the orders of the Income-tax authorities. This investigation had also, therefore, to be abandoned. In the case of a third mill, namely, Atherton Mills, Kanpur, the management pleaded insufficiency of clerical staff and inability to give necessary facilities for investigation to our Cost Accounts Officer. Consequently, another mill was selected from the same centre. In a fourth case, namely that of Victoria Mills, Calcutta, when the cost data were tabulated, it was found that its output in the period January—June 1947, was very low. Its cost data had, therefore, to be left out of account in preparing our estimates. Our final selection, thus, included 16 mills, which are listed as under :—

Mills selected for cost investigation.

C = Composite mills. S = Spinning mills.

Representative Size.		Mills selected		
		Spindles	Looms	Class of cloth and yarn manufactured.
	(a) Bombay City.			
40,000-80,000 spindles and 1,000-2,000 looms.	(1) Madhusudan Mills (C)	55,812	1,742	c, m, f, sf.
	(2) Standard Mills (C) ..	51,696	1,677	c, m, f, sf.
	(3) Modern Mills No. 1 (S)	23,976	..	c, m, f, sf.
	(4) Raghuvanshi Mills (S)	32,288	..	c, m, f.
	(b) *Ahmedabad.*			
20,000-40,000 spindles and 500-1,000 looms.	(5) New Swadeshi Mills (C)	26,144	720	m.
	(6) Rohit Mills (C) ..	27,580	642	m, f, sf.
	(7) Hathising Manufacturing Co. (S).	13,416	..	c.

Representative size.		Mills selected		
		Spindles	Looms	Class of cloth and yarn manufactured.
	(c) Bengal and Bihar.			
(1) Below 10,000 spindles & below 250 looms.	(8) Bangeswari Cotton Mills (C).	9,800	300	m, f, sf.
(2) 20,000-40,000 spindles & 500-1,000 looms	(9) Mohini Mills No. 2 (C) ..	16,576	334	m, f, sf.
	(d) South India.			
20,000-40,000 spindles and 250-500 looms.	(10) The Somasundaram Mills (C).	23,200	390	m, f, sf.
	(11) Kaleeswarar Mills (C) ..	43,260	295	c, m, f, sf.
	(12) Pankaja Mills (S) ..	25,276	..	c, m, f, sf.
	(13) Asher Textiles (S) ..	14,000	..	m, f.
	(e) Central India and C. P.			
10,000-20,000 spindles and 250-500 looms.	(14) Rajkumar Mills (C) ..	19,728	700	c, m, f.
	(15) Rekhchand Gopal das Mohta Mills (C).	21,876	466	c, m
	(f) Upper India (U. P. Zone).			
20,000-40,000 spindles and 500-1,000 looms.	(16) Cawnpore Textiles(C) ..	23,936	510	m.

The above figures are taken from the Mill Statement for 31st August 1947, as published by the Millowners' Association, Bombay.

Note.— c=Coarse=up to 16s count.
m=Medium=from 17s count to 35s count.
f=Fine=from 36s count to 47s count.
sf=Superfine=48s count and above.

The list contains 11 composite mills and 5 purely spinning mills. It will be noticed that some of the mills in the above list do not fall within the limits laid down for the representative size in each different zone. Although they are somewhat larger or smaller than the representative size fixed by us, we believe that they come near enough to the representative group to be satisfactory for our purpose. As regards the efficiency of machinery and management of the mills, we were mainly guided by the available balance sheets and records of production and by the advice of our Honorary Technical Adviser. It may also be mentioned that the Millowners' Associations concerned, to whom the names of the selected mills were communicated at an early stage of the inquiry, with one exception, made no comments as to the representative character of the mills selected.

Scope and method of costing.

6. (a) *Scope.*—(i) *Types of yarn and cloth.*—On the basis of the cost data collected from the 16 costed mills for the period January—June 1947, costs have been tabulated for 40 different counts of yarn ranging from 2s to 100s counts and 102 varieties of cloth, forming the bulk of production at the costed mills. Out of the 40 counts of yarn, again, 12 have been selected as key counts for preparing our final estimate of fair ex-mill price of reeled yarn. The selected counts are as under :—

6s—Spun by 1 mill in Bombay.

10s—Spun by 1 mill in South India and 2 mills in Bombay.

14s—Spun by 1 mill in Central India, and 1 mill in Bombay spinning both on the mule and ring spindles.

16s—Spun by 2 mills in Bombay, 1 in Ahmedabad, 1 in South India and 1 in Central India.

20s—Spun by 2 mills in Bombay, 2 in South India and 1 in Central India.

30s—Spun by 1 mill in Bombay and 1 in South India.

40s(Indian Cotton)—Spun by 1 mill in Bombay and 3 in South India.

40s (African Cotton)—None of the 16 mills actually spun 40s reeled yarn from African cotton. We have, however, got the cost data for 42s weft yarn spun by a mill in Ahmedabad and adjusted the same to determine costs for 40s.

60s (Egyptian cotton carded)—Spun by 1 mill in South India.

60s (Egyptian cotton combed)—Spun by 1 mill in Bombay.

80s (Egyptian cotton carded)—Spun by 1 mill in South India.

80s (Egyptian cotton combed)—Spun by 1 mill in Bombay.

(*N.B.*—The cost figures collected by our Cost Accounts Officers include cost data relating to 2 counts of yarn spun from cotton waste, viz., 1½s and 2s, which have been found to be unsatisfactory. We could not, therefore, use these as the basis for estimating fair ex-mill prices for these and other counts of yarn spun from cotton waste).

As regards cloth, out of the 102 varieties costed, we have selected 43 varieties of grey cloth woven in long length pieces, that is, excluding dhoties, sarees, towels, etc., and have estimated their fair Realization Multipliers. The Realization Multipliers for each varierty of cloth made by different costed mills but linked to the same group in the Schedule were averaged out, for each of the three periods. It may be mentioned that the Textile Control Board fixed ex-mill prices on the basis of a Schedule of Realization Multipliers for all cloths (in annas per pound of yarn woven). The ex-mill prices worked out for all varieties of cloths on the basis of such a Schedule were applicable for the period from 1st February 1946 to 30th November 1947 (see Appendix *VIII*).. The 43

varieties of cloth we have costed fall within the following groups of the Schedule :—

Group 1	COUNTS			
	Warp 2	Weft 3	Reed 4	Picks 5
Indian Cotton				
III	14	10	40	40
IV	14	14	44	44
V	20	20	52	52
VI	20	30	54	54
VII	30	30	56	56
VIII	30	40	62	62
Imported cotton and carded				
IX	40	40	66	66
Imported cotton and combed				
XIII	60	80	74	74

The production of the 43 selected varieties of cloths mentioned above is distributed among the costed mills as follows :—

Group	No. of varieties of cloth.	No. of mills producing.
III	3 varieties	1 mill in Central India.
IV	2 ,,	1 variety each by 2 mills in Bombay.
V	14 ,,	4 by 1 mill in Ahmedabad, 6 by 1 mill in Bombay, 1 by a second mill in Bombay, 2 by 1 mill in Indore, and 1 by 1 mill in Kanpur.
VI	2 ,,	1 mill in Bombay, and 1 mill in Calcutta.
VII	7 ,,	5 by 1 mill in South India, 1 by a Bombay mill, and 1 by a Calcutta mill.
VIII	4 ,,	3 by 1 mill in South India, and 1 by a mill in Indore.
IX	8 ,,	5 by 1 mill in Ahmedabad, 2 by 1 mill in Calcutta, and 1 by one mill in Bombay.
XIII	3 ,,	2 by 1 mill in Bombay, and 1 by 1 mill in Ahmedabad.

It will be seen that the list contains only 8 groups as compared with 16 groups included in the Schedule of Realization Multipliers adopted by the Textile Control Board. The omission of the remaining 8 groups, namely, groups I and II, X to XII, XIV to XVI, is due to two reasons.

In the first place, none of the costed mills produced grey cloths of (long length pieces) falling within groups I and II and X to XII. Secondly, under the standardization scheme brought into operation from 1st December 1947, spinning of counts finer than 80s has been prohibited. Although the standardization scheme itself has been dropped, the prohibition of spinning of counts finer than 80s still continues. Consequently, we have costed cloths up to group XIII, that is, up to 60s warp and 80s weft, and left out groups XIV to XVI which include warps from 70s to 100s and wefts from 90s to 120s. From the cost data for the eight groups we have costed, we have, however, worked out the Realization Multipliers for groups I and II, and X to XII, and included these as well in the Schedule.

(ii) *Costing periods.*—Our Cost Accounts Officers have examined the actual cost data at the 16 mills for the period January—June 1947, which is the latest period for which complete cost figures were available. To start with, we have taken this period as the base period and the cost data relating to this period constitute our basic data. Detailed cost reports relating to each individual mill as well as a consolidated cost report for all the mills taken together have been prepared. As the managements of the mills concerned have desired that the detailed cost data of the individual mills should be kept confidential, they are not included in this report, but are given in the Cost Accounts Officers' reports which are being submitted to Government separately as confidential enclosures. On the basis of those actual cost data, we have prepared estimates of fair ex-mill prices of the main counts of cotton yarn and Schedule of Realization Multipliers for cloths for the period January—June 1947. We have also prepared estimates of fair ex-mill prices of cotton yarn and Schedule of Realization Multipliers for cloths for January 1948 and April 1948 on the basis of cost data for January—June 1947 and after making due allowance for changes in the cost of cotton, wages, stores, and fuel and power.

(b) *Elements of cost.*—Costs have been analysed under three main heads :—

(I) *Cotton.*—For the period January—June 1947, the average cost of cotton to the mills with a few necessary adjustments and inclusive of all incidental charges, has been taken. For January 1948 and April 1948, the replacement cost of cotton to the mills has been taken on the basis of average prices of different varieties of cotton at which actual transactions took place in the Bombay Cotton Market as reported by well-known firms on the different days of the week ending 3rd January and the week ending 10th April 1948, respectively.

(II) *Manufacturing charges* comprising.—(i) Wages.—These include the mills' actual expenditure on basic wages, dearness allowance, bonus and leave with pay. All the relevant awards of Industrial Courts and/or Arbitration Boards have been taken into account.

(ii) Stores.

(iii) Power and fuel.

(iv) Overheads, exclusive of the items given in (III) below.

(III) *Depreciation, interest on working capital and return on fixed capital.*—These three items are discussed later in paragraphs 7 to 10.

(c) *Cost analysis.*—(I) *Spinning.*—The cost of spinning has been worked out in two stages :

(i) cost per lb. from blow-room to roving, and

(ii) cost of ring or mule spinning as the case may be.

This gives the cost of spinning per lb. of yarn up to the spindle point. In the case of composite mills, cost of yarn used as warp and weft for weaving has been taken at the spindle point. In the case of yarn reeled and sold, reeling, bundling and baling costs are added to arrive at the cost of reeled yarn. From the cost of yarn at the spindle point is deducted 2½ per cent. of the cost of yarn to allow for the net moisture regain (that is, 3½ per cent. for standard moisture regain minus 1 per cent. for wastage caused in reeling). We have also worked out the doubling costs of certain typical counts of two-fold yarn and found that they are about the same as were fixed by the Textile Control Board. We have, therefore, accepted the Textile Control Board's figures for this purpose and accordingly worked out the fair ex-mill prices of two years.

(II) *Weaving.*—Weaving costs have been calculated in a detailed manner by working out the cost of each process separately, as, for example, winding of warp, winding of weft (if done); warping, sizing, drawing-in, weaving, calendering, folding and packing.

(d) *Adjustment of discrepancies in cost data.*—The cost data of some of the mills for the basic period, i.e., January—June 1947 are found to be inconsistent in certain respects. The relevant cost figures have, therefore, been suitably adjusted to remove discrepancies and anomalies revealed by them. The main adjustments made are indicated below :—

(i) Though departmental production figures are maintained by most of the mills, the figures of departmental input and output in some of the mills are found to be inconsistent. Where the figures have shown discrepancies, suitable adjustments have been made.

(ii) In the case of two mills in Bombay and one mill in Calcutta, satisfactory cost data are not available for all the 6 months of the basic period (January—June 1947). We have, therefore, taken only one month's cost data in the case of the two Bombay mills and two months' cost data in the case of the Calcutta mill for the purpose of costing.

(iii) Figures of raw cotton costs given by certain mills have shown wide divergences from those given by the other mills in respect of the same count of yarn spun by them. Similar discrepancies have also been seen in respect of recovery percentage for cotton. The relevant figures in these cases have been adjusted by reference to types of mixings used, counts of yarn spun and spinning production per spindle shift of 8 hours.

(iv) The figures of actual production of yarn given by certain mills have been found to be below normal. These have been scrutinised and adjusted with reference to normal production per spindle shift for each count.

(e) *Processing charges.*—For the purpose of estimating bleaching, dyeing, finishing and other charges listed in the Schedule of Realization Multipliers for all cloths (see Appendix VIII), we have examined the available figures collected from Rohit Mills, Ahmedabad and Standard Mills, Bombay. We have found that the charges given in that Schedule for items 1 to 12 and 17 tally approximately with our estimates. With regard to all the remaining items, except item No. 27, we have been unable to prepare estimates of fair charges, due to lack of accurate cost data. So far as item 27 (compensatory allowance for coal) is concerned, our estimate is given in the statement of break-up of fair ex-mill prices of yarn and of Realization Multipliers for cloth.

Financial items.

7. The cost analysis given in paragraph 6 above leaves out depreciation, interest on working capital, return on fixed capital and managing agency commission. We shall now discuss these four items.

Depreciation.

8. (a) *The present law and practice.*—It is possible to hold widely varying opinions as to the rate at which depreciation on the block should be allowed for the purpose of costing. The 1926 Tariff Board on the Cotton Textile Industry held that depreciation should be the first charge on production and recommended that the rates should be the same as were allowed by the income-tax authorities at that time, *viz.*, 2½ per cent. on buildings, 5 per cent. on machinery and 7½ per cent. on bleaching and dyeing plant. The 1932 Tariff Board on the Cotton Textile Industry estimated the ratio at which depreciation was actually allowed by the mills on buildings, machinery and bleaching and dyeing plant and worked out an average depreciation at 3¾ per cent. The 1936 Tariff Board allowed depreciation at 4 per cent. It should be noted that before 1941, depreciation was calculated by the income-tax authorities as well as by the successive Tariff Boards with reference to the original value of the block. Since 1941, however, the income-tax authorities have allowed depreciation on the written-down value of the block. At present, the rates allowed for income-tax purposes are as follows :—

I. *Buildings* :

(a) First-class substantial buildings	.. ..	2.5 per cent.
(b) Second-class buildings	.. ..	5 per cent.
(c) Third-class buildings	.. ..	7.5 per cent.

(Double these rates are allowed for factory buildings excluding office, godowns, officers' and employees' quarters).

II. Machinery and plant for the cotton textile industry 10 per cent.

(An extra allowance up to a maximum of 50 per cent. of the normal rate is given by the income-tax officer wherever the concerns claim such allowance on account of double or multiple-shift working. This extra allowance will be proportionate to the number of days during which double or multiple shifts are worked).

But the actual practice of the mills regarding allocation to depreciation varies from year to year, depending upon the amount of the gross profits earned. When the gross profits are low, the amount set aside by the mills for depreciation falls below the standard laid down by the income-tax authorities ; when, on the other hand, the gross profits are high, the amount set aside for the purpose is equal to, and sometimes higher than such standard. Thus, the average provision for depreciation made by the four costed mills in the Bombay region was as low as 2.04 per cent. of the gross block in 1938-39 and as high as 9.16 per cent. in 1940-41. Similar wide variations are also shown by the figures relating to the costed mills in other zones. The figures of depreciation actually set aside by the 16 costed mills are given in Appendix IX.

(b) *Claim for a higher rate of depreciation.*—The spokesmen of the millowners represented to us that the plant and machinery in most of the cotton mills in India had become old and worn out and would require replacement at a very early date. It was further stated by them that the cost of such replacement would be three or four times the pre-war cost. They, therefore, suggested that in making allowance for depreciation, the present replacement cost of the plant and machinery should be kept in view. We have carefully considered this suggestion but have found some practical difficulties in accepting it in full. It is true that in periods of stable or falling prices as well as in times of slow technological changes, the cost of replacement will, as a rule, be about the same as or less than the original cost of the block. In such cases the cost of replacement should be met out of the normal depreciation fund. But in times of rising prices, replacement will involve a higher cost than the original value of the block. Likewise, during a period of rapid technological changes, replacement cost will be higher, for, at such a time replacement is not merely the installing of an identical plant but involves ' betterment ' as well, that is, the use of an improved and perhaps a bigger plant. We consider that it will be convenient for the purposes of accounting as well as for clear analysis, if these several factors of replacement cost are treated separately. While the normal depreciation fund should contribute towards writing down the original cost of the block, special reserves would be necessary to meet the higher cost of replacement due to inflationary prices and betterment of the plant. Strict principles of business management would require that such special reserves should be built up year by year out of the annual profits by regulating the payment of dividends to the share holders. Most of the mills in India have built up good reserves during the last 8 or 9 years of high prices and large profits. Whether these reserves are adequate for the replacement of plant and machinery will be examined by us later when we consider the question of a return on the fixed capital. At this stage therefore, we confine ourselves to determining a reasonable rate of depreciation that should be allowed for the purpose of fixing fair ex-mill prices.

(c) *The rate allowed by the Board.*—In this connection, we have had some useful data to guide us. First of all, the Bombay Millowners' Association has given us certain figures of what the Association has called ' depreciation due ' for the Bombay mills. This has been arrived at by taking 2½ per cent. depreciation on the original block cost of buildings

and 5 per cent. on that of machinery. For the years 1940-45, the average value of the gross block of these mills comes to Rs. 3,463.60 lakhs per annum. For the same period, the average depreciation on this basis comes to Rs. 141.35 lakhs per annum, or 4.08 per cent. of the average gross block. For the same period, the average depreciation per annum allowed by the Income-tax Department comes to Rs. 155.17 lakhs, which works out to 4.48 per cent. on the average gross block. Again, for the period 1941-46, the average value of the gross block per annum of the Ahmedabad mills amounts to Rs. 1,975 lakhs. The average depreciation written off by the mills for the same period was Rs. 95.90 lakhs, or 4.86 per cent. on the average gross block. Both these cases include years of very high profits. Taking the year 1945, which may be regarded as a prosperous year for the cotton mill industry, we find the position as follows. The amount of depreciation allowed by the Income-tax Department for the year 1945 for the Bombay mills works out to 3.8 per cent. of the original block. The actual depreciation written off by the Ahmedabad mills in the same year amounts to 4.1 per cent. of the gross block. The statement giving the relevant figures will be found in Appendix X. After considering these figures of depreciation allowance claimed by the Bombay mills and actually allowed to them by the Income-tax Department and also the amount of depreciation written off by the Ahmedabad mills, we have come to the conclusion that a rate of 4 per cent. on the gross block will be an adequate provision for depreciation at the present time. This is the rate which we have allowed in estimating the fair ex-mill prices.

Interest on working capital.

9. (a) *Basis of determining the amount of working capital.*—Interest on working capital must also be regarded as an essential element in the cost of production. The amount of the working capital required depends upon two main factors : (a) the period of turnover, and (b) the total cost of production per period of turnover. Most of the millowners' associations in India have stated in their replies to the Board's questionnaire that whereas in the prewar years, the working capital required was roughly equal to 4 months' cost of production, the corresponding period in the present circumstances should be taken as 6 months. They have based the claim for this larger amount of working capital on the ground that, in the present state of uncertainty regarding the supply of cotton and stores and of transport difficulties, the mills have to maintain stocks of at least 6 months' requirements of cotton and stores. The Upper India Chamber of Commerce has claimed that the mills in the northern zone would require at least 9 months' cost of production as working capital because they have to carry larger stocks of cotton and stores. Our Honorary Technical Adviser has, however, informed us that the average stocks of cotton maintained by the cotton mills in India are approximately equal to 4 months' requirement. Moreover, in the present condition of strong demand and short supply of cloth, we believe that the period of turnover should not, in any case, be longer than that in prewar years. The 1932 Tariff Board on the Cotton Textile Industry allowed 4 months' cost of production as working capital. We consider that, in the present circumstances also, 4 months' cost of production should be adequate for the purpose.

(b) *Rate of interest.*—We have next to determine the rate of interest to be allowed on this working capital. The rate of interest suggested by the Bombay Millowners' Association is 3½ to 4 per cent., Ahmedabad Millowners' Association 4½ per cent., Bengal Millowners' Association 4½ per cent. to 7 per cent., Upper India Chamber of Commerce 6 per cent., Indian Merchants' Chamber, Calcutta, 4 to 7 per cent., Marwari Chamber of Commerce, Calcutta, 6 per cent., Delhi Cloth Mills 5 per cent., Madura Mills 5 per cent., and Krishnarajendra Mills, Mysore, 6 per cent. On the other hand, the Ahmedabad Textile Labour Association has stated that the mills do not have to borrow much for their working capital, because they have got considerable liquid reserves. This Association, therefore, has suggested that 2 per cent. interest on working capital would be adequate. The spokesmen of the millowners' associations have, however, informed us that, though many of the mills have got larger reserve funds than before, these funds are not always adequate to meet the working expenses and that even the financially strong mills have sometimes to go to the money market for borrowing working capital for short periods. We have also examined the balance-sheets of a number of mills and have found that their present reserve, though considerable, would require to be supplemented to some extent by borrowings to meet the requirement of working capital. The available evidence shows that the rate of interest paid by the mills for short-term working capital varies from 3 to 6 per cent. But, in view of the fact that the majority of the mills have got large reserve funds, they would be required to borrow only small amounts and for short periods, and also in view of the fact that the financial position of most of the mills is strong and their credit generally high, we consider that an allowance of 3 per cent. interest per annum on working capital should be adequate for the purpose. We have taken this rate in estimating fair ex-mill prices.

Return on fixed capital.

10. (a) *Employed capital, working capital and fixed capital.*—In recent discussions about the regulation of profits, it has been suggested that they should bear a relation to 'employed capital'. 'Employed capital', however, comprises (a) fixed capital which is more or less permanently sunk in land and buildings, and plant and machinery, and (b) circulating or working capital which is employed in buying raw materials and stores, power and fuel, paying wages and salaries, and meeting office expenses and certain other overheads. While both types of capital are essential to productive activities, they differ as to their source, liquidity, incidence of risk and normal rates of return. Fixed capital is derived mostly from paid-up share money, depreciation fund and reserves and sometimes through debentures. This capital is subject to double risks, namely (a) normal trade risks and (b) risks incidental to the trade cycle. On the other hand, working capital is derived mostly from liquid reserves, bank loans, private deposits, and sometimes, from share money. It is more liquid than fixed capital. The incidence of risks to which it is subject is, therefore, rather small. These differences between the two categories of capital would indicate that the return in the two cases must be different; it must, as a rule, be higher for fixed capital than for working capital. For purposes of analysis, therefore, we consider it desirable that the two categories of capital should be treated separately in fixing a reasonable return. There is also another distinct advantage in this

method of procedure. Whereas fixed capital can be more or less identified with certain tangible and measurable assets like land and buildings and plant and machinery, and working capital with prime costs and certain supplementary costs of production, ' employed capital ', which consists of mixed items belonging to different categories, does not easily lend itself to being broken up into its constituent elements. The Bombay Millowners' Association, in a note submitted to us, has described ' employed capital ' as comprising (a) paid-up capital *plus* (b) all reserves excluding taxation reserves, *plus* (c) loans including debentures and other loans, secured and unsecured, and other liabilities and outstanding debts due by the Company ; *plus* (d) profits accruing during the year, *minus* (e) investments, if any, *minus* (f) cash on hand and at bank. In this case, item (c) loans, for instance, may be raised through debentures bearing a high rate of interest or they may be just short-term loans from banks or deposits carrying a low rate of interest. Then again, investments item (e) may be treasury bills or bank deposits carrying a very low rate of interest or long-dated Government securities carrying a higher rate of interest. In view of these difficulties in fixing a reasonable return on ' employed capital ' as a whole, we have preferred to follow the method of breaking up the capital employed into two clear-cut and distinguishable parts, namely, working capital and fixed capital. This method was followed by the prewar Tariff Boards and also by the Interim Tariff Board. We have already dealt with working capital and fixed the rate of interest on it. We now proceed to discuss the question of fixed capital.

(b) *Cost of the block taken as the fixed capital.*—The question arises as to how the fixed capital of a mill is to be ascertained. In a new concern, the fixed capital is, as a rule, more or less identical with the paid-up share capital. But in an established concern, the block comprising land and buildings and plant and machinery has been built up from paid-up share capital, reserve fund, depreciation fund and sometimes out of debentures and loans. So far as the paid-up share capital is concerned, the whole of it may be taken to have been sunk in the block. As regards the depreciation fund, which is strictly meant to provide for replacement and renewals, it is difficult to ascertain what part of that fund has been actually spent in replacement and what part in extension of the block. Similar difficulties will arise in finding out what part of the reserve fund and loans has been actually spent in financing working capital and what part in extension of the block. Moreover, the four types of funds mentioned above differ from one another in respect of their source or origin, liquidity and risk-bearing. Thus, for instance, while the paid-up capital represents a definite contribution by shareholders out of their own pockets, the same cannot be said of the depreciation fund and reserves. As regards the depreciation fund, it is built up out of annual allocations to depreciation which forms part of the cost of production ; it has, therefore, been already charged through prices. No further return can be claimed for it, even though it may be part of ' employed capital '. As regards reserve fund, this, as a rule, is built up out of the surpluses left over from time to time after the distribution of reasonable dividends to the shareholders. It is true that the ownership of the reserve fund belongs to the Company concerned or its shareholders. It is also true that it would be open to the

Company to fritter away the profits by distributing high dividends, rather than build up reserves. It is, however, necessary to emphasise that the reserves are generally built up after paying reasonable dividends to the shareholders. The shareholders, cannot, therefore, claim the same rate of return on the reserve fund as on the paid-up share capital, though both are parts of ' employed capital '. And lastly, debenture and loan charges having been already debited to the mills before profits are declared, they cannot be considered again for the purposes of calculating the return on fixed capital. In determining a reasonable rate of return on fixed capital, therefore, it would, strictly speaking, be necessary to trace it to its diverse sources and then fix a return on each portion of it according to its source. But such a procedure would require a mass of financial data which are not available to us. In view of this difficulty, we have adopted the alternative method of fixing a return in relation to the cost of the fixed block.

(c) *The block taken at its pre-war cost.*—The block may be valued either at its original cost or at its replacement cost at current price. The spokesmen of the millowners' associations have stated before us that the replacement cost of a representative cotton textile plant at today's price would be 3 or 4 times the original cost of the block at pre-war price and they have claimed that, in fixing a return on the block, this should be kept prominently in view. We recognised that there is some force in the contention that in estimating the value of the block the cost of replacement should be taken because it is only on this basis that a projected new factory has to buy its plant and machinery. It may be noted that the pre-war Tariff Boards in their inquiries into steel, cotton textile and paper industries, fixed the value of the block on the basis of replacement cost. It may also be mentioned that the Costs Sub-Committee of the Working Party on the cotton textile industry appointed by the British Government in 1945 held the same view. They observe : " We hold unanimously that both depreciation and interest should for costing purposes be based upon current replacement value of plant, not only because that value alone provides a definite objective basis, but also because current values are normally the best index of the prices at which eventual replacement will take place ". (*vide* page 52 of the Report of Working Party on Cotton). Although we agree that, as a rule, the replacement cost of plant should be taken for the purpose of calculating the return, we cannot, for a number of reasons, apply that principle in the present case. In the first place, the state of machinery differs considerably from mill to mill, depending upon its age and the care with which it has been used. Taking the cotton industry as a whole, it is not possible to say how much of the machinery requires to be replaced immediately and how much of it can still serve for production for varying periods of time. Secondly, even if all the machinery had become sufficiently worn out to require replacement in the near future, it would not be feasible to procure new machinery for all the mills in the near future. As a matter of fact, the Post-war Planning Committee on Cotton Textiles in its Report has emphasised this difficulty and planned for the procurement of cotton textiles machinery only to the extent of 27 per cent., 18 per cent. being for replacement and 9 per cent. for new projects. It is more than probable that the replacement will take place by stages over a period of about 12 to 15 years. It is not possible to say at the present time what the cost of replacement will

be at different dates in the future when actual replacement will take place. As already stated, most of the representatives of millowners' associations have stated before us that the cost of replacement would be about 3 or 4 times the pre-war cost. We have, however, made inquiries from persons intimately acquainted with the cotton textile industry, and have been informed that, according to the latest advices, the cost of replacement today would be 2¼ to 2½ times the pre-war cost. We have been further informed by persons who have recently contacted the textile machinery manufacturers in U.K. that the price of textile machinery is likely to begin to go down in the near future and that in a period of 18 months or so, the price of machinery may go down to 175 or 180 per cent. of what it was in the pre-war period. Since it is not possible for us to forecast what the cost of replacement will be at different dates of replacement in the future, we have taken the pre-war cost of the block for the purpose of calculating the return. But in fixing a return on that block, we have taken into consideration the need for building up reserves over a period of 12 to 15 years which will considerably supplement the mill's present reserves for buying new plant and machinery.

(d) *The rate of return on the gross block.*—Return on the gross block should be sufficient to provide for (i) corporation tax and business profits tax, (ii) adequate reserves, (iii) managing agents' commission, and (iv) dividend on paid-up capital subject to income-tax (and super-tax in the case of very high income groups). The interim Tariff Board, as a rule, allowed a return of 10 per cent. on the block in the cases of war-time industries. But obviously, the cotton textile industry, which is the oldest and the largest industry in the country and which has achieved considerable prosperity and financial strength during the last few years, cannot be treated on the same basis as wartime industries for the purpose of return. The 1936 Tariff Board on the cotton textiles industry allowed a return of 6 per cent. on the gross block, which was then accepted as satisfactory by the textile industry as a whole. If a 6 per cent. return was deemed sufficient for the industry in 1936, a higher return cannot reasonably be claimed at the present time. But we did not consider it enough to be guided merely by a comparison of the present position with that of 1936. We have also considered whether a 6 per cent. return can reasonably provide for all the items indicated above. We have broadly examined the financial data available for certain important groups of mills and find that a 6 per cent. return on the gross block can adequately provide for all the items that must be covered by it. We have therefore allowed a return of 6 per cent. on the gross block for the purpose of estimating fair ex-mill price. In testing the adequacy of this rate of return, we have considered the following factors :

(i) (a) *Corporation Tax.*—Under the present law, corporation tax payable by those companies which distribute their dividends in India is at the rate of 2 annas per rupee or 12½ per cent. on the gross profit.

(i) (b) *Business Profits Tax.*—Under the present law on the subject, abatement is granted up to 6 per cent. of capital or Rs. 2 lakhs, whichever may be larger. It seems that the term ' capital ' is used here in the sense of employed capital, being equal to the paid-up capital plus reserves excluding reserves for taxation purposes plus loans minus investments.

In the case of the majority of the cotton mills in India, capital in this sense will be larger than the gross block. Since we have provided for a return at the rate of 6 per cent only on the gross block, the whole of this return or profit would be free from the incidence of the Business Profits Tax. But in these few cases, where the gross block is larger than the capital (as taken for the purpose of Business Profits Tax) some portion of the gross profit would be subject to the Business Profits Tax. We have examined this matter with specific reference to the available financial data in respect of the 16 costed mills. A statement showing the amounts of Business Profits Tax, if any, payable by these mills is given in Appendix XI. We find that no Business Profits Tax would be payable in the case of 10 of the costed mills and that the amount of the tax payable by the remaining 6 would be Rs. 1,441, Rs. 2,363, Rs. 3,374, Rs. 6,265, Rs. 8,039 and Rs. 18,507. The average amount of B.P.T. for the 16 mills taken together would work out to only Rs. 691. The average incidence of this tax per mill comes to less than 1|3rd of 1 per cent. of the return on fixed capital. It would thus be seen that, so far as the representative mills are concerned the incidence of the Business Profits Tax on the basis of our proposals would be practically negligible. For the purpose of our analysis, therefore, we have left this tax out of account. It may be that some mills, due to their higher efficiency or peculiar financial structure, will earn a higher rate of profit than what we have allowed and will, therefore, be liable to an appreciable amount of B.P.T. But, obviously, that cannot vitiate our general conclusion on this matter.

(ii) *Reserves.*—We think that it should normally be reasonable to allocate 20 per cent. of the profit to the reserve fund. In the case of the cotton textile industry, however, we consider that a much larger percentage must be allocated to reserves to enable the mills to buy new machinery over a period of about 12 or 15 years. It should, however, be remembered that for the purpose of buying new machinery, the reserves will be supplemented to a considerable extent by certain other funds like the depreciation fund. We consider that at least 40 per cent. of the return should be allocated to reserves even though this might lead to a reduction in the dividend paid to the shareholders to the barest minimum.

(iii) *Managing agents' commission.*—In practice, this is governed by the terms of the agreement between the mills and their managing agents. The terms vary from centre to centre and even from mill to mill in the same centre. Again, in the case of some mills, a fixed office allowance varying from mill to mill is charged by the managing agents. Thus, for instance of the 16 costed mills, 7 show this fixed office allowance varying from Rs. 18,000 to Rs. 30,000 per annum, while the remaining 9 show no such item. In the case of these 7 costed mills which have actually incurred this expenditure, we have allowed it. But whether there is such office allowance or not, there is always a commission based on profits and in some cases on sales. Thus, for instance, in the case of the Bombay Mills the rate of commission charged, as a rule, is 10 per cent. on profits. In the case of Ahmedabad mills, however, the commission generally is 3½ per cent on sales. The spokesmen of the Ahmedabad textile mills have stated that unlike the Bombay mills which give a commission of 1 per cent. to guarantee brokers in respect of sales, the Ahmedabad mills do not give any such commission to brokers, and that, consequently their

charges are not higher than those of the Bombay mills. We find, however, that at the present level of prices, at any rate, this works out to a much higher figure than 10 per cent. on profit. Some of the managing agents in Coimbatore, under the terms of the recent agreements, besides charging 10 per cent. on profits, also charge 1 per cent. on all purchases of cotton and stores and 2½ per cent. on all capital expenditure. The reason given for these additional items of commission by the Coimbatore mill-agents is that without these items of commission, the managing agents in that area could not undertake the responsibility for raising the necessary capital and managing the business of the mills. We have considered what should be a reasonable rate of commission to the managing agents under the present circumstances. Our view is that the commission should be only a percentage on net profit, with a provision for a minimum amount when no profits are made. As to the appropriate rate of percentage on profit to be allowed to the managing agents, we think that there is a strong case for a reduction in the prevalent rate of 10 per cent. on profits. The managing agents' commission, in our opinion, should cover (a) remuneration for procuring capital, (b) insurance against financial and other risks and (c) payment for general business management. Since the cotton textile industry is well established in the country and has been quite prosperous in recent years, the managing agents' responsibility for procuring the necessary capital is now less than in the pre-war years. As regards the financial and other risks, these are also smaller today. As to management, though the managing agents exercise a general business control over production, the actual technical management in each mill is mainly the function of the mill manager. At the same time, we recognise that the managing agents will have to bear the responsibility of reconstructing the cotton textile industry in the years to come if it is to meet world competition. Taking all these factors into consideration, we think that a remuneration of 7½ per cent. on profit (gross return *minus* depreciation) should be adequate in the present circumstances of the cotton textile industry. But we must make it clear that this would be a fair rate of remuneration for the managing agents only in the present condition of the cotton textile industry. What the rate of remuneration should be in the case of other industries or even in the case of the cotton textile industry in different circumstances is a matter into which we are not called upon to enter.

(iv) *Dividend to shareholders.*—The rate of return on an investment should normally comprise three elements, *viz.*, (a) pure interest, (b) compensation for the risk of fluctuations in profits and (c) remuneration for management. So far as the shareholders in joint stock companies are concerned, they practically take no part in management. The return on their paid-up share capital should, therefore, consist of the two other elements. As regards pure interest, this is generally measured by the rate of interest paid on long-term Government securities which is at present about 3 per cent. per annum. As regards the risk of fluctuations, it is true that the share-holders of cotton mill companies suffered a heavy reduction in their dividends during the depression period ; but during the last 6 or 7 years of exceptional prosperity, they have received good dividends. Besides, most of the mills have paid off their pre-war debts

and have built up considerable reserves. These reserves are strictly speaking, the property of the shareholders and they serve to strengthen the financial position of the mills which belong to them. In considering an appropriate dividend, we must also bear in mind that dividends have to be limited in order to allow reserve funds being built up. Moreover, it is likely that the present sellers' market will continue for another 3 to 4 years. Consequently, the risk of loss due to keen internal or external competition will be negligible. Besides, a limitation of dividend, which is an unearned income, is also in line with current ideas about distribution of the national income. It is sometimes claimed that, in fixing dividends the present high rate of taxation should also be taken into consideration. We do not agree with this view, because one of the aims of high direct taxes is to bring about a more equitable distribution of income by cutting down unearned incomes as well as the higher ranges of earned incomes. Taking all these factors into consideration, we think that a dividend of 4 to 5 per cent., subject to tax, should be adequate in the present case.

(v) *Effects of the proposals regarding the return and its allocation to different items.*—For the purpose of illustrating the effects of the proposals we have made above, we have analysed a few concrete cases as shown below :

(i) *Bombay (City) mills as at the end of* 1946.

		Rs. in lakhs
	Gross block	3737
	Paid-up capital	1511
	(*a*) Return at 6 % of gross block	224·00
minus	(*b*) Corporation tax @ 2 as. per rupee on (a)	28·00
	Balance	196·00
minus	(*c*) Reserves at 40% of (*a*)	89·60
	Balance	106·40
minus	(*d*) Managing agents' commission at 7½% on (a)	16·75
	Balance	89·65
minus	Divided at 5% on paid-up capital	75·55
	Balance	14·10

The Secretary of the Bombay Millowners' Association was good enough to furnish us with certain consolidated financial data for the Bombay mills as a whole. We also discussed these figures with him. It was found that the Bombay mills at the end of 1946 had aggregate reserves of over Rs. 30 crores and about Rs. 15 crores as depreciation fund, giving a total of Rs. 45 crores. In the analysis given above, we have provided for allocation to reserves at the rate of about Rs. 90 lakhs per annum which

if it is maintained will amount to over Rs. 13 crores in fifteen years. Adding the existing reserves to this fund, we get a sum of Rs. 58 crores. We have also provided 4 per cent. on the gross block for depreciation. In a period of 15 years this will amount to over Rs. 22½ crores. We understand that some of the mills in Bombay provide for depreciation by actually writing down the block from year to year while others provide for it by setting aside the amount of depreciation in a separate fund while keeping the value of the block intact. We were also informed that, in the case of the Bombay mills as a whole, roughly one-third of the total amount of depreciation is written down year by year while the remaining two-thirds accrue to the depreciation fund. On this basis, the depreciation fund of the Bombay mills will increase by about 15 crores in the next 15 years. There will thus be altogether a sum of over Rs. 70 crores available for replacement of machinery in the Bombay mills over a period of 15 years, and this is about double the value of the present block at pre-war cost. It will thus be seen that the proposals we have made regarding a return on the fixed capital and its distribution under different headings not only allow reasonable dividends to be paid to the shareholders but also make ample provision for the accumulation of reserves and depreciation fund for the purpose of purchasing new machinery in the next 15 years or so. It may be noted that, in the case of the Bombay mills, the provision for dividends and reserves taken together would amount to 11 per cent. of the paid up capital.

(ii) *Ahmedabad Mills.*

		Rs. in lakhs
	Gross block	2,091
	Paid-up capital	688
	(*a*) 6 % on gross block	125·46
minus	(*b*) Corporation tax at 2 as. per rupee or 12½% on (a)	15·68
	Balance	109·78
minus	(*c*) Reserves at 40% on (a)	50·18
	Balance	59·60
minus	(*d*) Managing Agents' commision at 7½% on (a)	9·41
	Balance	50·19
minus	Dividend at 5% on paid-up capital	34·40
	Balance	15·79

In this case, the allocation to reserves and dividends taken together work out to over 12 per cent. of the paid-up capital.

(iii) 16 *costed mills.*

		Rs. in lakhs
	Gross block	551·7
	Paid-up capital	292·45
	(*a*) 6% on gross block	33·11
minus	(*b*) Corporation tax at 8 as. per rupee or 12½% on (a)	4·14
	Balance	28·97
minus	(*c*) Reserves at 40% on (a)	13·24
	Balance	15·73
minus	(*d*) Managing Agents' commission at 7½% on (a)	2·48
	Balance	13·25
minus	(*e*) Dividend at 4½% on paid-up capital	13·16
	Balance	0·09

In this case the allocation to reserves and dividends taken together come to about 9 per cent. of the paid-up capital.

We have applied the same principle of allocation separately to each of the 16 costed mills. We have found that after providing for corporation tax reserves at 40 per cent. of the total return, and managing agents' commission at 7½ per cent. on the return, six mills can declare a minimum dividend of 5 per cent., two mills 4½ per cent., three mills 4¼ per cent. and five mills about 4 per cent.

The analysis given above shows the broad considerations we have had in mind in making our proposals. The scheme of allocation we have proposed for different items is given rather by way of analysis and illustration than as a rigid formula that can be applied in every case. It is open to a particular mill, for instance, to reduce the rate of dividend and increase the allocation to reserve or *vice versa*, but we believe that, on the whole, the proposals we have made are calculated to meet all the demands that can be reasonably made in the present circumstances for a share of the gross profit or return on the fixed capital.

Method of arriving at fair ex-mill prices of yarn and realization multipliers for cloth.

11. Depreciation, interest on working capital, and return on fixed capital (gross block) at the rates mentioned in paragraphs 7 to 10 above have been worked out separately for each of the costed mills, the block being taken on the basis of their latest balance-sheets (1946 or 1947). The total figures for all the mills under each of these three items have been added up and divided by the total number of spindle shifts of 8 hours each in the case of yarn and the total number of loom shifts of 8 hours each in the case of cloth ; and on this basis, the average return per spindle shift of 8 hours and per loom shift of 8 hours has been separately worked out. This return comes to 4 pies per spindle shift of 8 hours and 20 annas per loom shift of 8 hours. The return at 4 pies per spindle shift has been

converted into return per lb. of yarn on the basis of production in ozs. per spindle shift of 8 hours. Similarly, the return at 20 annas per loom shift is converted into return per lb. of yarn woven on the basis of production in yards of cloths per loom shift of 8 hours. The figures of return thus obtained have been added to the cost of the raw material and manufacturing charges to arrive at fair ex-mill prices of yarn and Realization Multipliers for cloths. We have averaged out these ex-mill prices of yarn and Realization Multipliers for cloths for different mills producing the same count of yarn or same group-variety of cloths. We have thus arrived at fair ex-mill prices of yarn and fair Realization Multipliers for cloths for each of the three periods. These would be applicable to all mills in India.

Fair ex-mill prices of yarn and Realization Multipliers for cloth.

12. Below is given a list of six statements showing ex-mill prices of yarn and three statements showing Realization Multipliers for grey cloth :—

Statement I : showing average costs and fair ex-mill prices of typical counts of reeled yarn for January-June 1947.

Statement II : showing average costs and fair ex-mill prices of typical counts of reeled yarn after 19th January 1948.

Statement III : showing average costs and fair ex-mill prices of typical counts of reeled yarn after 23rd April 1948.

Statement IV : comparative statement showing fair ex-mill prices of reeled yarn and ex-mill ceiling prices as fixed by the Textile Control Board per bundle of 10 lbs. for the period January-June 1947.

Statement V : comparative statement showing fair ex-mill prices of reeled yarn and ex-mill ceiling prices as fixed by the Industry per bundle of 10 lbs. after 19th January 1948.

Statement VI : comparative statement showing fair ex-mill prices of reeled yarn after 23rd April 1948 and ex-mill prices of reeled yarn as fixed by the Madura Mills Co., Ltd., Madura (as per their circular dated 21st April 1948. See Appendix XII).

Statement VII : comparative statement of Realization Multipliers (for grey cloth in annas per lb. of yarn woven : Based on 36" cloth in grey state) as estimated by the Board and as fixed by the Textile Control Board : January—June 1947.

Statement VIII : comparative statement of Realization Multipliers (for grey cloth in annas per lb. of yarn woven : Based on 36" cloth in grey state) as estimated by the Board and as fixed by the Industry : After 19th January 1948.

Statement IX : Statement of Realization Multipliers (for grey cloth in annas per lb. of yarn woven : Based on 36" cloth in grey state) as estimated by the Board, after 23rd April 1948.

N.B.—(It may be noted, that consequent on the removal of price stamping, the Industry has not fixed Realization Multipliers for this period).

STATEMENT I.

Statement showing average costs and fair ex-mill prices of typical counts of reeled yarn for January|June 1947.

Count.	Type of Cotton.	Average raw cotton mixing cost in Rs. per candy.	Average recovery percentage of raw cotton.	Average clean cotton cost per lb. of yarn. As.	Average production per spindle shift of 8 hours. Oz.	Average total spinning cost upto spindle pt. per lb. of yarn. As.	Average total cost upto spindle pt. per lb. of yarn (Column 5+7). As.	Average reeling, bundling and baling cost per lb. of yarn. As.	Average total cost of reeled yarn per lb. (Column 8+9). As.	Less 2½% for moisture regain (On column 8). As.	Average net cost of reeled yarn per lb. (Column 10-11). As.	Average return per lb. of yarn at 4 pies per spindle shift. As.	Fair ex-mill price per lb. of yarn (Column 12+13). As.	Fair ex-mill price per bundle of 10 lbs. yarn. Rs. As. Ps.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
6s	Indian	313	82	7·79	14·70	2·60	10·39	1·10	11·49	0·26	11·23	0·36	11·59	7 4 0
10s	,, ...	350	82	8·71	7·74	2·75	11·46	1·26	12·72	0·29	12·43	0·69	13·12	8 3 3
14s	,, ...	400	82	9·95	6·90	3·09	13·04	1·37	14·41	0·33	14·08	0·77	14·85	9 4 6
16s	,, ...	400	82	9·95	6·00	3·80	13·75	1·55	15·30	0·34	14·96	0·89	15·85	9 14 6
20s	,, ...	450	83	11·07	5·20	4·16	15·23	1·70	16·93	0·39	16·55	1·03	17·58	10 15 9
30s	,, ...	570	84	13·85	2·80	6·22	20·07	2·20	22·27	0·50	21·77	1·90	23·67	14 12 9
40s	,, ...	610	84	14·82	2·20	7·46	22·28	2·60	24·88	0·56	24·32	2·42	26·74	16 11 6
40s	African	876	85	21·03	2·40	7·02	28·05	2·60	30·65	0·70	29·95	2·22	32·17	20 1 9
60s	Egyptian Carded	1,170	90	26·53	1·33	10·70	37·23	4·88	42·11	0·93	41·18	4·01	45·19	28 3 9
60s	Egyptian Combed	1,170	79	30·23	1·45	11·11	41·34	4·88	46·22	1·03	45·19	3·68	48·87	30 8 9
80s	Egyptian Carded	1,170	90	26·53	0·90	14·87	41·40	6·28	47·68	1·04	46·64	5·93	52·57	32 13 9
80s	Egyptian Combed	1,170	79	30·23	0·95	15·32	45·55	6·28	51·83	1·14	50·69	5·61	56·30	35 3 9

STATEMENT II.

Statement showing average cost and fair ex-mills prices of typical counts of reeled yarn after 19th January, 1948.

Count.	Type of Cotton.	Average raw cotton mixing cost in Rs. per candy.	Average recovery percentage of raw cotton.	Average clean cotton cost per lb. of yarn. As.	Average production per spindle shift of 8 hours. Oz.	Average total spinning cost upto spindle pt. per lb. of yarn. As.	Average total cost upto spindle pt. per lb. of yarn (Column 5+7). As.	Average reeling, bundling and baling cost per lb. of yarn. As.	Average total cost of reeled yarn per lb. (Column 8+9.) As.	Less 2½% for moisture regain (On Column 8). As.	Average net cost of reeled yarn per lb. (Column 10-11). As.	Average return per lb. of yarn at 4 pies per spindle shift. As.	Fair ex-mill price per lb. of yarn (Column 12+13). As.	Fair ex-mill price per bundle of 10 lbs. of yarn. Rs. As. Ps.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
6s	Indian	400	32	9·96	14·70	2·73	12·69	1·13	13·82	0·32	13·50	0·36	13·86	8 10 6
10s	,, ...	460	32	11·45	7·74	2·99	14·44	1·36	15·80	0·36	15·44	0·69	16·13	10 1 3
14s	,, ...	460	32	11·45	6·90	3·37	14·82	1·71	16·53	0·37	16·16	0·77	16·93	10 9 3
16s	,, ...	460	32	11·45	6·00	4·19	15·64	1·82	17·46	0·39	17·07	0·89	17·96	11 3 6
20s	,, ...	530	31	13·03	5·20	4·62	17·65	1·92	19·57	0·44	19·13	1·03	20·16	12 9 6
30s	,, ...	630	34	16·31	2·80	6·83	22·14	2·92	25·06	0·55	24·51	1·90	26·41	16 8 0
40s	,, ...	680	34	16·52	2·20	8·30	24·82	3·06	27·88	0·62	27·26	2·42	29·68	18 9 0
40s	African	1,200	35	28·81	2·40	7·93	36·74	3·06	39·80	0·92	38·88	2·22	41·10	25 11 0
60s	Carded Egyptian	1,500	30	34·01	1·33	12·03	46·04	5·48	51·52	1·15	50·37	4·01	54·38	33 15 9
60s	Combed Egyptian	1,500	29	38·75	1·45	12·03	50·78	5·48	56·26	1·27	54·99	3·68	58·67	36 10 9
80s	Carded Egyptian	1,500	30	34·01	0·90	16·64	50·65	7·13	57·78	1·27	56·51	5·93	62·44	39 0 0
80s	Combed Egyptian	1,500	29	38·75	0·95	16·68	55·43	7·13	62·56	1·39	61·17	5·61	66·78	41 11 9

STATEMENT III.

Statement showing average cost and fair ex-mills prices of typical counts of reeled yarn after 23rd April 1948

Count.	Type of Cotton.	Average raw cotton mixing cost in Rs. per candy.	Average recovery percentage of raw cotton.	Average clean cotton cost per lb. of yarn.	Average production per spindle shift of 8 hours.	Average total spinning cost up-to spindle pt. per lb. of yarn.	Average total cost upto spindle pt. per lb. of yarn (Column 5+7).	Average reeling, bundling and baling cost per lb. of yarn.	Average total cost of reeled yarn per lb. (Column 8+9).	Less 2½% for moisture regain (On Column 8).	Average net cost of reeled yarn per lb. (Column 10-11).	Average return per lb. of yarn at 4 pice per spindle shift.	Fair ex-mill price per lb. of yarn (Column 12+13).	Fair ex-mill price per bundle of 10 lbs. yarn.
				As.	Oz.	As.	As.	As.	As.	As.	As.	As.	As.	Rs. As. Ps.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
6s	Indian	450	82	11·20	14·70	2·69	13·89	1·12	15·01	0·35	14·66	0·36	15·02	9 6 0
0s	,, ...	600	82	14·93	7·74	2·97	17·90	1·35	19·25	0·35	18·80	0·49	19·49	12 3 0
14s	,, ...	600	82	14·93	6·90	3·34	18·27	1·72	19·99	0·46	19·53	0·77	20·30	12 11 0
12s	,, ...	600	82	14·93	6·00	4·13	19·06	1·80	20·86	0·48	20·38	0·89	21·27	13 4 9
20s	,, ...	720	83	17·70	5·20	4·58	22·28	1·92	24·20	0·56	23·64	1·03	24·67	15 6 6
30s	,, ...	850	84	20·65	2·80	6·78	27·43	2·92	30·35	0·69	29·66	1·90	31·56	19 11 6
40s	,, ...	970	84	23·57	2·20	8·25	31·82	3·07	34·89	0·80	34·09	2·42	36·51	22 13 0
40s	African	*1,800	85	43·22	2·40	7·75	50·97	3·07	54·04	1·27	52·77	2·22	54·99	34 6 0
60s	Carded Egyptian	2,660	90	60·32	1·33	11·94	72·26	5·48	77·74	1·81	75·93	4·01	79·94	49 15 3
60s	Combed Egyptian	2,660	79	68·72	1·45	11·88	80·60	5·48	86·08	2·02	84·06	3·68	87·74	54 13 3
80s	Carded Egyptian	2,660	90	60·32	0·90	16·49	76·81	7·14	83·95	1·92	82·03	5·93	87·96	54 15 6
80s	Combed Egyptian	2,660	79	68·72	0·95	16·48	85·20	7·14	92·34	2·13	90·21	5·61	95·82	59 14 3

* Free Price.

STATEMENT IV.

Comparative statement showing the I.T.B's fair ex-mill prices of reeled yarn and ex-mill ceiling prices as fixed by the Textile Control Board per bundle of 10 *lbs. January|June* 1947.

Yarn in counts	Cotton	Single Yarn		Two Fold Yarn	
		I. T. B. Fair ex-mill prices	Ex-mill ceiling prices fixed by T.C.B.	I. T. B. Fair ex-mill prices	Ex-mill ceiling prices fixed by the T.C.B.
		Rs. As. Ps.	Rs. As. Ps.	Rs. As. Ps.	Rs. As. Ps.
4	Indian ..	7 0 0	6 8 0	7 14 0	7 6 0
6	Do. ..	7 4 0	6 12 0	8 2 0	7 10 0
8	Do. ..	7 8 0	7 0 0	8 6 0	7 14 0
9	Do. ..	7 10 0	7 2 0	8 10 0	8 2 0
10	Do. ..	8 3 3	8 4 0	9 7 9	9 8 6
12	Do ..	8 7 3	8 8 0	9 11 9	9 12 6
14	Do. ..	9 4 6	8 12 0	10 9 0	10 0 6
15	Do. ..	9 6 6	8 14 0	10 11 0	10 2 6
16	Do. ..	9 14 6	10 10 0	11 13 0	12 8 6
18	Do. ..	10 11 6	10 14 0	12 12 9	12 15 0
20	Do. ..	10 15 9	11 2 0	13 3 3	13 5 6
22	Do. ..	11 5 9	11 8 0	13 12 9	13 15 0
24	Do. ..	11 11 9	11 14 0	14 6 3	14 8 6
25	Do. ..	11 14 9	12 1 0	14 9 3	14 11 6
26	Do. ..	14 4 9	13 5 0	16 15 3	15 15 6
28	Do. ..	14 8 9	13 13 0	17 3 3	16 7 6
30	Do. ..	14 12 9	14 1 0	17 7 9	16 12 0
32	Do. ..	15 0 9	14 5 0	17 14 3	17 2 6
40	Do. ..	16 11 6	16 5 0	20 1 6	19 11 0
42	Do. ..	16 15 6	16 11 0	20 8 0	20 3 6
44	Do. ..	17 5 6	17 1 0	21 0 6	20 12 0
40	Foreign (African)	20 1 9	22 3 6	23 7 9	25 9 6
42	Do. ..	20 7 9	22 9 6	24 0 3	26 2 0
44	Do. ..	20 13 9	22 15 6	24 8 9	26 10 6
60	Carded Foreign (Egyptian) ..	28 3 9	32 8 0	33 11 9	38 0 0
60	Combed Foreign (Egyptian) ..	30 8 9	35 8 0	36 0 9	41 0 0
80	Carded Do. ..	32 13 9	44 8 0	41 11 9	53 6 0
80	Combed Do. ..	35 3 0	47 8 0	43 15 0	56 4 0

STATEMENT V.

Comparative statement showing the I.T.B's fair ex-mill prices of reeled yarn and ex-mill ceiling prices fixed by the industry per bundle of 10 lbs. after 19th January, 1948.

Yarn in counts	Cotton	Single Yarn		Two Fold Yarn	
		I. T. B. Fair ex-mill prices after 19-1-48	Ex-mill prices fixed by industry (circular to mall mills dated 21-1-48 from Chairman, T.C.B).	I. T. B. Fair ex-mill prices after 19-1-48	Ex-mill prices fixed by industry (circular to all mills dated 21-1-48 from Chairman, T.C.B).
1	2	3	4	5	6
		Rs. As. Ps.	Rs. As. Ps.	Rs. As. Ps.	Rs. As. Ps.
4	Indian ..	8 6 6	9 14 6	9 4 6	10 12 6
6	Do. ..	8 10 6	10 2 6	9 8 6	11 0 6
8	Do. ..	8 14 6	10 6 6	9 12 6	11 4 6
10	Do. ..	10 1 3	10 10 6	11 5 9	11 15 0
12	Do. ..	10 5 3	10 14 6	11 9 9	12 3 0
13	Do. ..	10 7 3	11 0 6	11 11 9	12 5 0
14	Do. ..	10 9 3	11 10 0	11 13 9	12 14 6
16	Do. ..	11 3 6	11 14 0	13 2 0	13 12 6
17	Do. ..	12 3 6	13 3 0	14 3 3	15 2 9
18	Do. ..	12 5 6	13 5 0	14 6 6	15 6 0
19	Do. ..	12 7 6	13 7 0	14 9 9	15 9 3
20	Do. ..	12 9 6	13 9 0	14 13 0	15 12 0
22	Do. ..	12 15 6	13 15 0	15 6 6	16 6 0
24	Do. ..	13 5 6	14 5 0	16 0 0	16 15 6
26	Do. ..	16 0 0	15 11 6	18 10 6	18 6 0
28	Do. ..	16 4 0	15 15 6	18 14 6	18 10 0
30	Do. ..	16 8 0	16 3 6	19 3 0	18 14 6
32	Do. ..	16 12 0	16 7 6	19 9 6	19 5 0
36	Do. ..	17 13 0	18 14 0	20 14 9	21 15 9
40	Do. ..	18 9 0	19 10 0	21 15 0	23 0 0
42	Do. ..	18 15 0	20 0 0	22 7 6	23 8 6
44	Do. ..	19 5 0	20 6 0	23 0 0	24 1 0
40s	Foreign (African) ..	25 11 0	26 6 6	29 1 0	29 12 6
42	Do. ..	26 1 0	26 12 6	29 9 6	30 5 0
44	Do. ..	26 7 0	27 2 6	30 2 0	30 13 6
60 carded	Foreign (Egyptian)	33 15 9	33 7 0	39 7 9	38 15 0
60 combed.	Do. ..	36 10 9	37 1 0	42 2 9	42 9 0
80 carded.	Do. ..	39 0 0	Not fixed by industry.	47 14 0	Not fixed by industry.
80 combed.	Do. ..	41 11 9	43 2 0	50 7 9	51 14 9

STATEMENT VI.

Comparative statement showing the I.T.B's fair ex-mill prices of reeled yarn after 23rd April 1948 and ex-mill prices of reeled yarn as fixed by the Madura Mills Co., Limited, Madura. (As per their circular dated 21st April, 1948).

Yarn in counts	Cotton	Single Yarn		Two Fold Yarn	
		I. T. B. Fair ex-mill prices after 23-4-48	Ex-mill prices of Madura Mills Co., Ltd., after 23-4-48	I. T. B. Fair ex-mill prices after 23-4-48	Ex-mill prices of Madura Mills Co., Ltd., after 23-4-48
1	2	3	4	5	6
		Rs. As. Ps.	As. As. Ps.	Rs. As. Ps.	Rs. As. Ps.
4	Indian ..	9 2 0	13 6 0	10 0 0	14 4 0
6	Do. ..	9 6 0	13 10 0	10 4 0	14 8 0
8	Do. ..	9 8 0	13 14 0	10 6 0	14 12 0
10	Do. ..	12 3 0	14 2 0	13 7 6	15 6 6
12	Do. ..	12 7 0	14 6 0	13 11 6	15 10 6
13	Do. ..	12 9 0	14 8 0	13 13 6	15 12 6
14	Do. ..	12 11 0	15 1 0	13 15 6	16 5 6
16	Do. ..	13 4 9	16 8 0	15 3 3	18 6 6
17	Do. ..	15 0 6	16 10 0	17 0 3	18 9 9
18	Do. ..	15 2 6	16 12 0	17 3 6	18 13 0
19	Do. ..	15 4 6	16 14 0	17 6 9	19 0 3
20	Do. ..	15 6 6	17 0 0	17 10 0	19 3 6
22	Do. ..	15 12 6	17 10 0	18 3 6	20 1 0
24	Do. ..	16 2 6	18 0 0	18 13 0	20 10 6
26	Do. ..	19 3 6	20 0 0	21 14 0	22 10 6
28	Do. ..	19 7 6	20 4 0	22 2 0	22 14 6
30	Do. ..	19 11 6	20 8 0	22 6 6	23 3 0
32	Do. ..	19 15 6	20 12 0	22 13 0	23 9 6
36	Do. ..	22 1 0	24 4 0	25 2 9	27 5 9
40	Do. ..	22 13 0	25 0 0	26 3 0	28 6 0
42	Do. ..	23 3 0	25 6 0	26 11 6	28 14 6
44	Do. ..	23 9 0	25 12 0	27 4 0	29 7 0
40	Foreign (African)	34 6 0	Not quoted	37 12 0	Not quoted.
42	Do. ..	34 12 0	Do.	38 4 6	Do.
44	Do. ..	35 2 0	Do.	38 13 0	Do.
60s carded	Foreign (Egyptian)	49 15 3	51 0 0	55 7 3	56 8 0
60 combed	Do. ..	54 13 3	Not quoted	60 5 0	Not quoted.
80 carded	Do. ..	54 15 6	Do.	63 13 6	Do.
80 combed	Do. ..	59 14 3	65 0 0	68 10 3	73 12 0

STATEMENT VII.

Comparative statement of realization multipliers (for grey cloth in annas per lb. of yarn woven : based on 36" cloth in grey state), as estimated by the Board and as fixed by the Textile Control Board, January/June 1947.

Cloth group as per T. C. Bd. Schedule	Quality				Weight of yarn per lb. of yarn woven		Cost of clean cotton per lb. of yarn woven		Spinning charges for weight of yarn woven		Weaving charges 8 hours basis.	Return 1 at Rs. 1/4 per loom shift per lb. of yarn woven.	Board's estimate of realisation multiplier per lb. of yarn woven 1 (Col. 8 to 13)	Realisation multiplier fixed by Tex. Con. Board.
	Warp	Weft	Reed	Pick	Warp	Weft	Warp	Weft	Warp	Weft				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
					Lbs.	Lbs.	As.	As.	As.	As.	As.	As.	As.	As.
I	6	6	28	28	0·524	0·476	4·082	3·708	1·362	1·238	2·836	0·831	14·057	9·20
II	8	6	32	32	0·455	0·545	3·544	4·246	1·365	1·417	3·426	1·004	15·002	13·00
III	14	10	40	40	0·453	0·547	5·015	4·764	1·400	1·504	3·961	1·176	17·820	18·00
IV	14	14	44	44	0·524	0·476	5·801	4·736	1·619	1·471	5·633	1·370	20·630	19·20
V	20	20	52	52	0·523	0·477	5·790	5·280	2·176	1·984	6·141	1·969	23·340	24·50
VI	20	30	54	54	0·616	0·384	6·819	5·318	2·563	2·388	7·118	2·336	26·542	26·25
VII	30	30	56	56	0·520	0·480	7·706	6·648	3·234	2·986	7·615	2·971	31·160	31·50
VIII ..	30	40	62	62	0·592	0·408	8·773	6·047	3·682	3·044	10·303	3·344	35·193	37·60
IX	40	40	64	64	0·519	0·481	10·914	10·116	3·643	3·377	12·493	3·937	44·480	46·90
X	40	50	68	68	0·570	0·430	11·987	9·043	4·001	4·309	13·240	4·762	47·342	48·10
XI	40	60	70	70	0·615	0·385	12·933	8·096	4·317	4·119	16·667	5·141	51·273	52·20
XII	50	60	72	72	0·561	0·439	11·798	9·232	5·621	4·697	19·596	5·882	56·826	60·50
XIII	60	80	74	74	0·584	0·416	17·654	12·576	6·488	6·373	21·039	7·300	72·030	79·00

STATEMENT VIII.

Comparative statement of realisation multipliers (for grey cloth in annas per lb. of yarn woven based on 36" cloth in grey state) as estimated by the Board and as fixed by the industry after 19th January 1948.

Cloth group as per T.C.B. Schedule	Quality				Weight of yarn per lb. of yarn woven		Cost of clean cotton per lb. of yarn woven		Spinning charges for weight of yarn woven		Weaving charges 8 hours basis.	Return at Rs. 1/4 per loom shift per lb. of yarn woven.	Board's estimate of realisation multipliers per lb. of yarn woven (col. 8 to 13).	Realisation multipliers fixed by industry.
	Warp	Wrft	Reed	Pick	Warp	Weft	Warp	Weft	Warp	Weft				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
					Lbs.	Lbs.	As.	As.	As.	As.	As.	As.	As.	As.
I	8	6	28	28	0·524	0·476	5·219	4·741	1·430	1·300	3·190	0·831	16·711	14·000
II	8	6	32	32	0·455	0·545	4·532	5·428	1·424	1·488	3·515	1·004	17·391	18·000
III	14	10	40	40	0·453	0·547	5·902	6·263	1·527	1·636	4·786	1·176	21·290	23·000
IV	14	14	44	44	0·524	0·476	6·828	5·450	1·766	1·604	5·882	1·370	22·900	24·250
V	20	20	52	52	0·523	0·477	6·815	6·215	2·416	2·204	6·691	1·969	26·310	29·500
VI	20	30	54	54	0·616	0·384	8·026	5·879	2·846	2·623	7·710	2·336	29·420	31·000
VII	30	30	56	56	0·520	0·480	8·590	7·349	3·552	3·278	8·920	2·971	34·660	35·250
VIII	30	40	62	62	0·592	0·408	9·780	6·740	4·043	3·386	11·980	3·344	39·273	37·750
IX	40	40	64	64	0·519	0·481	14·951	13·858	4·116	3·814	14·004	3·937	54·680	51·750
X	40	50	68	68	0·570	0·430	16·422	12·388	4·520	4·700	15·749	4·762	58·541	56·000
XI	40	60	70	70	0·615	0·385	17·718	11·092	4·877	4·631	18·031	5·141	61·490	60·250
XII	50	60	72	72	0·561	0·439	16·162	12·647	6·132	5·281	21·256	5·882	67·360	64·500
XIII	60	80	74	74	0·584	0·416	22·630	16·120	7·026	6·939	23·315	7·300	83·330	82·750

STATEMENT IX.

Statement of realisation multipliers (for grey cloth in annas per lb. of yarn woven based on 36" cloth in grey state) as estimated by the Board after 23rd April, 1948.

Cloth group as per T.C.B. Schedule	Quality				Weight of yarn per lb. of yarn woven.		Cost of clean cotton per lb. of yarn woven		Spinning charges for weight of yarn woven		Weaving charges per lb. of yarn woven.	Return at Rs. 1/4 per loom shift per lb. of yarn woven.	Board's estimate of realisation multiplier per lb. of yarn woven (Total of Column Nos. 8 to 13).
	Warp	Weft	Reed	Pick	Warp	Weft	Warp	Weft	Warp	Weft			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
					lbs.	lbs.	As.	As.	As.	As.	As.	As.	As.
I	6	6	28	28	0·524	0·476	5·869	5·331	1·410	1·280	3·147	0·831	17·868
II	8	6	32	32	0·455	0·545	5·096	6·104	1·406	1·466	3·426	1·004	18·502
III	14	10	40	40	0·453	0·547	8·018	8·168	1·513	1·625	4·500	1·176	25·000
IV	14	14	44	44	0·524	0·476	9·274	7·107	1·750	1·590	5·559	1·370	26·650
V	20	20	52	52	0·523	0·477	9·257	8·443	2·395	2·185	6·651	1·969	30·900
VI	20	30	54	54	0·616	0·384	10·903	7·929	2·821	2·604	8·000	2·336	34·593
VII	30	30	56	56	0·520	0·480	12·256	9·912	3·526	3·254	9·011	2·971	40·930
VIII ..	30	40	62	62	0·592	0·408	13·953	9·617	4·014	3·366	12·300	3·344	46·594
IX	40	40	64	64	0·519	0·481	22·431	20·789	4·022	3·728	14·143	3·937	69·050
X	40	50	68	68	0·570	0·430	24·635	18·585	4·417	4·623	15·579	4·762	72·601
XI	40	60	70	70	0·615	0·385	26·580	16·640	4·766	4·597	19·824	5·141	77·548
XII	50	60	72	72	0·561	0·439	24·246	18·974	6·031	5·242	23·164	5·882	83·539
XIII	60	80	74	74	0·584	0·416	40·132	28·588	6·938	6·856	24·216	7·300	114·030

13. Under the terms of reference, we are required ' to devise a suitable method for necessary adjustments from time to time in the fair ex-mill prices of cloth and yarn, so as to allow for major fluctuations in the prices of raw cotton and other elements of cost of production '. We indicate below a method by which the different elements in the cost structure of yarn and cloth can be revised as and when necessary. To start with, we take the cost structure of yarn and cloth for April 1948 as the basis and proceed to indicate how appropriate adjustments, item by item, should be made so as to allow for major fluctuations in the main elements of cost.

Method of adjustment in the fair ex-mill prices of cloth and yarn in future.

(A) *Yarn.*—The following statement shows the break-up of fair ex-mill prices of reeled single yarn (key counts only), per bundle of 10 lbs., for April 1948.

STATEMENT X.

(Period : April 1948)

Statement showing the break-up of fair ex-mill prices of reeled single yarn per bundle of 10 lbs. (key counts only).

Counts of yarn	Raw cotton cost per candy	Recovery value per cent	*Clean cotton cost	Manufacturing Charges						Reeling & bundling charges	Fair Ex-mill prices	
				*Wages	*Power and Fuel	*Stores	*Overhead	Return	Total (Columns 5 to 9)		Reeled yarn Column 4+10+11)	Reeled yarn
1	2	3	4	5	6	7	8	9	10	11	12	13
	Rs.		As.	As.	As.	As.	As.	As.	As.	As.	As.	Rs. A. P.
6s Indian	450	82	109·20	14·86	2·83	2·99	5·52	3·60	29·80	11·20	150·20	9 6 0
10s Indian	600	82	145·57	16·40	3·12	3·30	6·11	6·90	35·83	13·50	194·90	12 3 0
14s Indian	600	82	145·57	18·44	3·51	3·71	6·87	7·70	40·23	17·20	203·00	12 11 0
16s Indian	600	82	145·57	22·81	4·34	4·59	8·49	8·90	49·13	18·00	212·70	13 4 9
20s Indian	720	83	172·58	25·30	4·82	5·09	9·41	10·30	54·92	19·20	246·70	15 6 6
30s Indian	850	84	201·34	37·46	7·13	7·53	13·94	19·00	85·06	29·20	315·60	19 11 6
40s Indian	970	84	229·81	45·58	8·68	9·16	16·97	24·20	104·59	30·70	365·10	22 13 0
40s African	1,800	85	421·40	42·87	8·16	8·62	15·95	22·20	97·80	30·70	549·90	34 6 0
60s Carded Egyptian	2,660	90	588·12	65·99	12·57	13·27	24·55	40·10	156·48	54·80	799·40	49 15 3
60s Combed Egyptian	2,660	79	670·02	65·65	12·50	13·20	24·43	36·80	152·58	54·80	877·40	54 13 3
80s Carded Egyptian	2,660	90	588·12	91·16	17·36	18·33	33·93	50·30	220·08	71·40	879·60	54 15 6
80s Combed Egyptian	2,660	79	670·02	91·10	17·35	18·32	33·91	56·10	216·78	71·40	958·20	59 14 3

(*) Figures after deducting 2½% for net moisture regain from cost of yarn at spindle point.

N. B.—Compensatory allowance for coal would be additional 100 per cent. of the power & fuel cost.

Statement showing the break-up of reeling, bundling and baling charges of reeled single yarn per bundle of 10 lbs. (key counts only) (vide statement X of main report) (period—April 1948).

Counts of yarn	Wages	Power and Fuel	Stores	Overhead	Total as shown in statement X of main Report.
	As.	As.	As.	As.	As.
6s Indian	6·83	0·24	2·17	1·96	11·20
10s Indian	8·61	0·26	2·22	2·41	13·50
14s Indian	11·48	0·29	2·31	3·12	17·20
16s Indian	12·10	0·30	2·33	3·27	18·00
20s Indian	13·02	0·31	2·36	3·51	19·20
30s Indian	20·76	0·40	2·60	5·44	29·20
40s Indian	21·93	0·41	2·63	5·73	30·70
40s African	21·93	0·41	2·63	5·73	30·70
60s Carded Egyptian	40·58	0·63	3·21	10·38	54·80
60s Combed Egyptian	40·58	0·63	3·21	10·38	54·80
80s Carded Egyptian	53·43	0·78	3·61	13·58	71·40
80s Combed Egyptian	53·43	0·78	3·61	13·58	71·40

For the purpose of analysis, we will deal separately with (a) raw cotton, (b) manufacturing charges, including reeling, bundling and packing charges.

(a) *Raw cotton.*—In our estimate of fair ex-mill prices of yarn, we have allowed for 4 months' stocks of raw cotton (see paragraph 9(a)). In the statement of fair ex-mill prices of reeled yarn given above, we have taken the cost of raw cotton at its replacement price, based upon actual

transactions in the Bombay Cotton Market during the week ending 10th April 1948. We consider that the replacement cost of cotton based upon this price should be applicable to the period ending 31st July 1948. That is to say, so far as the cost of cotton is concerned, there will be no need for a revision in the cost structure up to 31st July 1948. The cost of raw cotton being by far the largest element in the cost of production, we suggest that the period of revision in the ex-mill prices of yarn should be the same as that for raw cotton, *i.e.*, 3 months. If fair ex-mill prices for future periods are to be estimated as for instance, for the quarter August|October 1948, fair ex-mill prices of yarn should be worked out for July 1948 and the replacement cost of cotton should be taken at the average of cotton prices prevailing in the Bombay Cotton Market for the week ending 10th July 1948. In other words, in determining fair ex-mill prices for any quarter, replacement cost of raw cotton should be taken at the average of cotton prices prevailing in the Bombay Cotton Market during the first week of the month preceding that quarter. Having taken the cost of raw cotton on this basis and assuming the recovery value percentage of raw cotton at the figures given in column 3 of the Statement above, we can find out the cost of clean cotton for the quarter. It will be noted that the cost of cotton constitutes about 70 per cent. of fair ex-mill prices of reeled yarn.

(b) *Manufacturing charges.*—The manufacturing charges inclusive of reeling, bundling and packing charges constitute about 30 per cent. of the fair ex-mill prices of reeled yarn. (i) *Wages* are about 32 per cent. of the total manufacturing charges or about 9 per cent. of fair ex-mill prices. Normally, wages would not vary frequently. If, however, the average wages for the cotton textile industry as a whole change by more than 10 per cent. either way, there will be a case for revision in the figures under this item, and a revision may be made after a summary inquiry.

(ii) *Power and fuel.*—This constitutes about 7 per cent. of the total manufacturing charges. If, during any price period, the cost under this item varies by more than 50 per cent. there will be a case for revision and a revision may be made after a summary inquiry. In the case of a mill using coal for producing at least 75 per cent. of its motive power, a compensatory allowance should be given on the basis indicated in the above statement.

(iii) *Stores.*—This constitutes about 7 per cent. of the total manufacturing charges. In this case also, a revision may be made, if the cost under this item changes by more than 50 per cent.

(iv) *Overhead and* (v) *Return.*—These two items, which together constitute about 30 per cent. of the manufacturing charges, are the most stable elements in the cost structure. No significant variations in the figures under these items are likely to take place in the next 2 or 3 years.

(B) *Cloth.*—Revision of ex-mill prices for cloth should be made simultaneously with that of yarn. For the purpose of adjustment in fair ex-mill prices of cloth, the following statement showing the break-up of Realisation Multipliers for April 1948 should be taken as the basis.

STATEMENT XI.

Statement showing the break-up of the fair realisation multipliers for grey cloth 36" width in annas per lb. of yarn woven
(Period—April 1948).

Grey Cloth Group Nos.	Warp	Weft	Reed	Pick	Cost of Clear Cotton	Manufacturing Charges.							Fair Realisation Multipliers (Col. 6 +13)
						Wages	Power & Fuel	Stores other than Sizing Stores	Sizing Stores	Overhead	Returr	Total (Column 7 to 12)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
					As.	As.	As.	As.	As.	As.	As.	As.	As.
I	6	6	28	28	11·200	3·658	0·466	0·578	0·751	0·984	0·831	6·668	17·868
II	8	6	32	32	11·200	3·340	0·505	0·629	0·751	1·073	1·004	7·302	18·502
III	14	10	40	40	16·186	4·178	0·613	0·782	0·751	1·314	1·176	8·814	25·000
IV	14	14	44	44	16·381	5·026	0·718	0·933	0·665	1·557	1·370	10·269	26·650
V	20	20	52	52	17·760	6·521	0·943	1·215	0·520	2·032	1·969	13·200	30·960
VI	20	30	54	54	18·832	7·826	1·128	1·458	0·578	2·435	2·336	15·761	34·593
VII	30	30	56	56	22·168	9·352	1·360	1·745	0·406	2·929	2·971	18·762	40·930
VIII	30	40	62	62	23·570	11·798	1·665	2·185	0·405	3·627	3·344	23·024	46·594
IX	40	40	64	64	43·220	13·261	1·848	2·448	0·289	4·047	3·937	25·830	69·050
X	40	50	68	68	43·220	14·873	2·088	2·751	0·347	4·560	4·762	29·381	72·601
XI	40	60	70	70	43·220	17·774	2·433	3·268	0·347	5·365	5·141	34·328	77·548
XII	50	60	72	72	43·220	20·994	2·883	3·863	0·347	6·350	5·882	40·319	83·539
XIII	60	80	74	74	68·720	23·079	3·230	4·267	0·376	7·058	7·300	45·310	114·030

N. B.—Compensatory allowance for coal would be additional 75% of Power & Fuel Cost.

(a) *Cotton.*—The cost of cotton in this case may be revised on the same principles as for yarn. It should be noted, however, that in this statement, we have taken 20s cotton cost for 14s warp and 40s cotton cost for 30s warp.

(b) *Manufacturing charges.*—The different items under manufacturing charges should be revised on the same principles as indicated in the case of yarn. In the case of a mill using coal for producing at least 75 per cent. of its motive power, a compensatory allowance should be given on the basis indicated in the above statement.

Machinery for revision of prices

14. If periodical revision of prices is decided on by Government, we consider that such revision should be entrusted to an independent body.

Production and prices.

15. Although the scope of our inquiry is confined to the determination of fair ex-mill prices, we have to note that the price structure of yarn and cloth is closely related to the volume and structure of production. If the prices of yarn and cloth are to be kept at a reasonable level, production must be stepped up to the maximum. Standardization of production would go a long way to increase the output of yarn and cloth. We suggest, therefore, that the recommendations of the *Ad Hoc* Committee regarding standardization should be re-examined and adapted to the changed conditions of the present day. Again, to keep retail prices within reasonable limits, the distribution charges for yarn and cloth should be carefully reviewed. It would also be necessary to take adequate measures to rationalize and re-equip the cotton textile industry so as to enable it to supply the requirements of a rising standard of living of the people on the one hand, and to meet foreign competition in future, on the other. We suggest that Government should appoint an expert committee which should include representatives of the industry to inquire into and report on the following matters :—

(i) Standardization of production.

(ii) Distribution charges for yarn and cloth.

The question of rationalization, rehabilitation and re-equipment of the industry should also be investigated by a committee comprising representatives of the millowners and labour as well as technical experts and representatives of consumers.

16. We have to acknowledge the help we have received from the various associations and individuals who furnished us with information and gave evidence before us. We received considerable assistance from the Textile Commissioner and his office, for which our thanks are due to them. We desire to express our warm appreciation of the services of our Honorary Technical Adviser, Rao Sahib C. J. Soneji. His distinguished record as an expert in Textile Technology and his practical experience of the cotton mill industry rendered his help and advice specially valuable to us. He spared no pains in the discharge of his difficult duties and in placing at our service his exceptional knowledge and experience. We also thank Mr. P. V. R. Rao, Mr. R. Sundaram, Mr. O. N. Anand, Mr. K. Nagaswami and Mr. K. R. Aravamuthan, Cost Accounts Officers, for the valuable assistance they have given us in connection with this inquiry.

Acknowledgments.

G. L. MEHTA, *President.*

H. L. DEY, *Member.*

B. V. NARAYANASWAMY, *Member.*

M. AHMADULLAH,
Secretary.

BOMBAY,
29*th June* 1948.

APPENDIX I.

Questionnaire based upon the original terms of reference and issued in December, 1947.

Q. 1.—Which exactly are the categories of yarn and cloth in respect of which the present structure of prices requires re-adjustment? Please give a full description of the categories listed by you. If possible, give the percentage of the total output of yarn and cloth represented by each of the principal categories in your list during 1947 (January-December).

Q. 2.—To what extent is the present structure of prices responsible for the decline of output during the last two years? Please give concrete instances in support of your view.

Q. 3.—In what manner and to what extent are the costs of the chief categories of yarn and cloth affected by the standardization scheme? Please give illustrative factual data to show the extent of change in different items of costs, such as, (1) cotton, (2) wages, (3) overheads, (4) interest on working capital, etc.

Q. 4.—Will a proper re-adjustment of prices, enable the industry as a whole to step up over-all production by approximately 10 per cent. as visualised in the standardization scheme? If not, please give an estimate of the probable increase of output that might be expected with a proper re-adjustment of prices.

Q. 5.—Once fair ex-mill prices are fixed, what factors (such as cotton, wages, etc.) should be taken into account for automatic revision of such prices from time to time. Please indicate the schedule or formula of differentials which should be applied in calculating the extent of price adjustment necessitated by fluctuations in each of these factors.

Q. 6.—(a) If, in your view, relief has to be given to certain units or sections of the mill industry, should this relief be given through a direct increase of prices or by a subsidy?

(b) In case you prefer that the necessary relief should be given to certain units or sections of the industry through a direct increase of prices, could you devise a structure of prices which, while giving the necessary relief to the weaker mills, will at the same time not result in excessive profits for the more efficient mills producing the same categories of yarn and cloth?

(c) In case you prefer a scheme of subsidy for the weaker mills, will you please (i) indicate the basis and rate of the subsidy, (ii) give an estimate of the amount required for the purpose and (iii) suggest ways and means of finding the necessary funds for the same?

(d) If any special circumstances apply to certain mills engaged in the production of yarn alone, please state the circumstances affecting those mills and indicate how their difficulties may be removed, whether by price adjustment or by any other method.

Q. 7.—Apart from price adjustments and capital labour relationship, are there any other important factors, such as shortage of cotton, coal and mill-stores or transport difficulties, which are responsible for the recent decline in production? Please indicate practicable measures by which these factors can be improved.

Q. 8.—In view of the necessity of checking the tendency of the price level and cost of living to rise, (a) what minimum rate of profit on fixed capital should be allowed as part of fair ex-mill price of cotton goods ? (b) should this rate of profit be reduced to per spindle and per loom profit? (c) if so, on what basis? Please give full facts and reasons.

Q. 9.—Besides the fixed monthly office allowance, what further amount of managing agency commission should be allowed for services rendered by the Managing Agents in respect of PRODUCTION and which should form part of fair ex-mill price of cotton goods.

Q. 10.—(a) On what basis should the working capital of a mill be calculated? Should it be equal to 3 months' or 4 months' or 6 months' cost of production? Please state the reasons.

(b) In view of the present condition of the money market, what minimum rate of interest should be allowed on working capital? Please state your reasons.

(c) If working capital is borrowed partly or wholly, at what rate or rates is it now borrowed by the majority of the mills in your area?

Q. 11.—(a) By what method do the majority of the mills provide for depreciation? Do they do it by creating a depreciation reserve fund or by writing down the assets year by year?

(b) At what rate is the depreciation provided for by the majority of the mills? Is it at income-tax rate or at a rate higher or lower than the income-tax rate? If it is different from the income-tax rate, please specify the rate or rates at which depreciation is provided for by the mills. Also please give reasons for the adoption of a rate different from the income-tax rate.

Q. 12.—If there are any other special factors which have a bearing on the determination of fair ex-mill prices of cotton yarn and cloth, or any class of yarn or cloth, please indicate them and explain their incidence on the fair ex-mill prices.

APPENDIX II

Questionnaire based upon the revised terms of reference and issued in March, 1948.

Q. 1.—The industry has recently fixed ex-mill prices of various types of yarn and cloth. Do you consider these prices fair and reasonable, taking into account current prices of cotton and present levels of wages in different centres of the industry ? If not, please give your reasons.

Q. 2.—Do you consider that the prices fixed by the industry will enable the mills, whether purely spinning or composite, to reach the production targets fixed by their respective Panel Members? If not, please give your reasons.

Q. 3.—Once fair ex-mill prices are fixed, what factors (such as cotton wages, etc.) should be taken into account for automatic revision of such prices from time to time? Please indicate the schedule of differentials which should be applied in calculating the extent of price adjustment necessitated by fluctuations in each of these factors. Also, please indicate a reasonable interval of time for which prices should remain unaltered.

Q. 4.—(a) Please describe in detail the basis adopted by the mills in your area for arriving at their cost of raw cotton.

(b) Do you consider that basis economical for the mills? If so, please give reasons. If not, please suggest a better basis.

Please state facts and figures:

Q. 5.—On what basis should the office allowance of managing agents be fixed? What further remuneration to managing agents should be allowed for services rendered by them in respect of factory production?

Q. 6.—(a) By what method do the mills in your area provide for depreciation? Do they provide it by creating a depreciation reserve fund or by writing down the assets year by year?

(b) At what rate is the depreciation provided for by the mills in your area? Is it provided at the rate allowed by the income-tax rates or at a rate higher or lower than that? If it is different from the income-tax rate, please specify the rate or rates at which depreciation is provided for. Please give reasons.

Q. 7.—(a) On what basis should the working capital of a mill be calculated? Should it be equal to 3 months' or 4 months' or 6 months' cost of production? Please give reasons.

(b) In view of the present condition of the money market, what minimum rate of interest should be allowed on working capital? Please give reasons.

(c) If working capital is borrowed partly or wholly, at what rate of interest is it now borrowed by the mills in your area?

Q. 8.—(a) What minimum rate of profit on fixed capital should be allowed as part of fair ex-mill price?

(b) Should this rate be reduced to profit per spindle shift and profit per loom shift?

(c) If so, on what basis? Please give reasons.

Q. 9.—If there are any other special factors which have a bearing on the determination of fair ex-mill prices of yarn and cloth, please indicate them and explain their incidence on the fair ex-mill prices.

Q. 10.—Apart from price adjustments and capital-labour relationship, are there any other important factors which have been responsible for the decline in production in 1946 and 1947? Please indicate measures by which production can be increased.

Q. 11.—What measures should be adopted by the industry and/or by Government to keep the prices of yarn and cloth at reasonable levels?

APPENDIX III

List of firms or persons, who submitted replies to the Board's questionnaire or sent memoranda.

I. THOSE WHO SUBMITTED REPLIES TO THE QUESTIONNAIRE:

(a) *Millowners' Associations.*

1. Ahmedabad Millowners' Association, Post Box No. 7, AHMEDABAD.
2. Bengal Millowners' Association, 2 Church Lane, CALCUTTA.
3. Federation of Baroda State Mills & Industries, BARODA.
4. Indore Millowners' Association, INDORE (C.I.).
5. Millowners' Association, Elphinstone Building, Churchgate Street, P.B. No. 95, BOMBAY.
6. Southern India Millowners' Association, Race Course, COIMBATORE.
7. Upper India Chamber of Commerce, KANPUR.

(b) *Chambers of Commerce and other Associations.*

1. All India Textile Workers' Federation, Dalvi Building, Parel, BOMBAY 12.
2. Bombay Country Fancy and Grey Piecegoods Merchants' Association, Mulji Jetha Market Hall, Shaikh Memon Street, BOMBAY 2.
3. Bombay Province Hand Loom Weavers' Association, 104, Ganj Peth, POONA 2.
4. Bombay Shareholders' Association, Agakhan Building, Dalal Street, Fort, BOMBAY.
5. East India Cotton Association Limited, The Cotton Exchange, Marwari Bazaar, BOMBAY 2.
6. Federation of Bombay Retail Cloth Dealers' Association, 13, Bhangwadi, Kalbadevi Road, BOMBAY 2.
7. Indian Chamber of Commerce, 102 A, Netaji Subhas Road, CALCUTTA.
8. Maskati Cloth Market Association, Maskati Cloth Market, Railwaypura Post No. 2, AHMEDABAD.
9. Marwari Chamber of Commerce, Imperial Bank Building, Burra Bazar Branch, CALCUTTA.
10. Surat Weaving Association, Limda Chowk, Lokhandwala Building, SURAT.

(c) *Others.*

1. Delhi Cloth & General Mills Company Limited, Post Box No. 39, DELHI.
2. Director of Industries, East Punjab, KALKA.
3. Gaya Cotton and Jute Mills Limited, GAYA.
4. Kanga, M. P., Mr., Director of Industries, BOMBAY.
5. Keshawlal Himatlal, KALOL.
6. Motilal Agarwal Mills Limited, GWALIOR.
7. Madura Mills Company Limited, P.O. Box N. 35, MADURA.

8. Maratha Textile Mills, MIRAJ.
9. Nandlal Laxminarayan, AMALNER (E. K.).
10. Parola Taluka Handloom Weavers' Association, Parola (East Kandesh).
11. Savatram Ramprasad Mills Co., Ltd., Spinning and Weaving Mills, AKOLA.
12. Sur, J. B., Mr., 5, Amrita Banerjee Road, Kalighat, CALCUTTA 26.
13. Shree Hanuman Cotton Mills Co., Fuleshwar, P. O. Uluberia, Jagunnathpur, WEST BENGAL.
14. Sri Krishnarajendra Mills Ltd., Sri Krishnarajendra Mills P. O., MYSORE.
15. Tarke, N. D., Mr., North Kasba No. 903, SHOLAPUR.

II. THOSE WHO SUBMITTED WRITTEN MEMORANDA :

(a) *Chambers of Commerce and other associations.*

1. Adoni Handloom Cloth Weavers' Association, ADONI.
2. Andhra Chamber of Commerce, MADRAS 1.
3. Bengal Textile Dealers' Association, 30, Cotton Street, CALCUTTA.
4. Cloth Commission Agents' Union, Kucha Khanchand, DELHI.
5. Hand-Dyers, Hand-Printers, Hand-Bleached Goods Dealers' Association, 31, Cotton Street, CALCUTTA.
6. Marwari Chamber of Commerce, Imperial Bank Building, (Burra Bazaar Branch), Calcutta.
7. Marwari Sammelan, 152-B, Harrison Road, Calcutta.
8. Piecegoods Merchants' Association, Farrukhabad.
9. U. P. Cloth Retailers Chamber, H.O. 75|89 Ranjit Purwa, Kanpur.

(b) *Others.*

1. Buckingham and Carnatic Mills, Ltd., Madras.
2. Bhonsule, G.A., Mr., Tikekar Road, Dhantoli, Nagpur.
3. Cosmic Commercial Co., Kotavijay Laxmi Buildings, 712-13, Chickpet, Bangalore City.
4. Himatlal Jagjiwan, Mr., Agakhan Building, Dalal Street, Fort, Bombay.
5. Jayantilal R. Anklesaria, Mr., 84|2, Patwari Society, Mani Nagar, AHMEDABAD 8.
6. Kshirsagar, T. V., Mr., 45, Somwarpet, SHOLAPUR
7. Mangaldas Ramji, Mr. C|o Amulakh Amichand Co., 32-36, Marwari Bazaar, BOMBAY 2.
8. Morabad Spg. and Wvg. Mills Co., Ltd., MORABAD.
9. New India Fabrics, (Handloom Products), Mission Quarters, TRICHUR (Cochin State).
10. National Cotton Products, Ltd., 35, Haines Road, WORLI.
11. Pathy, G. R. V., Mr., Padma Nilayam, 19, Avenue Road, BANGALORE CITY.
12. Shirodkar, V.R., Mr., Jan Mansion, Sir P. Shah Mehta Road, Fort, BOMBAY.
13. Shree Hanuman Cotton Mills Co., Fuleshwar, P. O. Uluberia, JAGUNNATHPUR, (West Bengal).
14. Shree Sayaji Mills Co., Ltd., P. Box No. 37, BARODA.
15. Vasant Vijay Mills, 470-71, Worli Road, BOMBAY 18.
16. Vadilal Lallubhai, Mr., Maheswari Mansion, Napean Sea Road, BOMBAY.

APPENDIX IV.

Details regarding visits to Cotton Mills by the President, Members and Secretary of the Board.

Name of the mills.	Personnel of the Board who visited the mills.	Date of visit.
1. Western India Mills, Chinchpokli, Bombay ..	President, Dr. Dey, Dr. Naidu and Secretary.	28-11-47
2. The Mohini Mills Ltd., Calcutta	President	6-12-47
3. Vasant Vijay Mills, Worli, Bombay .. .. (Purely a processing mill.)	President, Dr. Naidu and Secretary.	21-1-48
4. Buckingham & Carnatic Mills Ltd., Madras ..	Dr. Naidu	3-2-48
5. Century Sp., & Mfg. Co. Ltd., Bombay ..	President, Dr. Dey, Dr. Naidu and Secretary.	27-2-48

APPENDIX V.

List of associations and persons who were invited to give evidence before the Board.

I.—MILLOWNERS' ASSOCIATION:

1. Ahmedabad Millowners' Association, AHMEDABAD.
2. Bengal Millowners' Association, CALCUTTA.
3. C. P. Millowners' Association, NAGPUR.
4. Federation of Baroda State Mills & Industries, BARODA.
5. Indore Millowners' Association, INDORE.
6. Millowners' Association, BOMBAY.
7. Southern India Millowners' Association, COIMBATORE.
8. Upper India Chamber of Commerce, KANPUR.

II.—TRADE UNIONS:

1. All India Trade Union Congress, BOMBAY.
2. All India Textile Workers' Federation, BOMBAY.
3. Indian National Trade Union Congress, BOMBAY.
4. Textile Labour Association, AHMEDABAD.

III.—SHARE-HOLDERS' ASSOCIATION:

1. Bombay Share Holders' Association, BOMBAY.

IV.—MERCHANTS' ASSOCIATION:

1. All India Federation of Cloth & Yarn Dealers' Association, BOMBAY.
2. Bombay Country Fancy & Grey Piece-goods Merchants' Association, BOMBAY.
3. Bombay Piecegoods Native Merchants' Association, BOMBAY.
4. Federation of Bombay Retail Cloth Dealers' Association, BOMBAY.
5. Maskati Cloth Markets Association, AHMEDABAD.

V.—CONSUMERS:

1. Mr. M. Ananthasayanam Ayyangar, M.L.A. (Central), CHITTOOR (Distt.).
2. Mr. Babubhai J. Patel, M.L.A. (Bombay), NADIAD.
3. B. Das, Esq., M.L.A. (Central), Orissa: CUTTACK.
4. Director of Industries, Bihar, PATNA.
5. Director of Industries, MADRAS.
6. S. Nijalingappa, Esq., President Karnatak Provincial Congress Committee, HUBLI.
7. Prof. N. G. Ranga, President, Andhra Provincial Congress Committee, BEZWADA.

VI.—RAW COTTON SUPPLIERS:

1. East India Cotton Association, BOMBAY.

OFFICIAL.

The Textile Commissioner to the Govt. of India, or his representative.

APPENDIX VI.

List of associations and persons who attended the inquiry and were examined by the Board.

4th May 1948—11 A.M.	*Names of the representatives.*
I.—MILLOWNERS' ASSOCIATION:	
1. Ahmedabad Millowners' Association, AHMEDABAD.	1. Mr. Ramanlal Lallubhai. 2. Mr. Kasturbhai Lalbhai. 3. Mr. Ratilal Nathalal. 4. Mr. Amratlal Hargovandas. 5. Mr. Madanmohan Mangaldas. 6. Dr. Patel, Secretary.
2. Bengal Millowners' Association, CALCUTTA.	Mr. M. L. Shah.
3. C. P. Millowners' Association, NAGPUR.	Mr. K. F. Madan.
4. Federation of Baroda State Mills & Industries, BARODA.	Mr. Chaturbhujdas Chimanlal.
5. Millowners' Association, BOMBAY.	1. Mr. Neville N. Wadia. 2. Mr. Krishnaraj M. D. Thackersey. 3. Mr. N. S. V. Aiyar, Secretary.
6. Southern India Millowners' Association, COIMBATORE.	Mr. G. K. Sundaram.
7. Upper India Chamber of Commerce, KANPUR.	1. Mr. Mangturam Jaipuria. 2. Mr. E. Royston.
Also present:	Mr. T. P. Barat, M.B.E., Textile Commissioner, Govt. of India.
5th May 1948—11 A.M.	
II.—TRADE UNIONS:	
1. All India Trade Union Congress, BOMBAY.	1. Mr. U. S. Mokashi.
2. All India Textile Workers' Federation, BOMBAY.	2. Mr. Manek Gandhi.

	Names of the representatives.
5th May 1948—11 A.M.	
3. Indian National Trade Union Congress, BOMBAY.	1. Mr. S. R. Vasavada. 2. Mr. G. D. Ambekar.
4. Textile Labour Association, AHMEDABAD.	Mr. N. H. Shaikh.
Also present:	Mr. M. R. Kazimi, Director of Cloth, Office of the Textile Commissioner, Govt. of India.
5th May 1948—3 P.M.	
III.—SHARE-HOLDERS' ASSOCIATION:	
1. Bombay Share Holders' Association, BOMBAY.	Mr. J. J. Kapadia.
6th May 1948—3 P.M.	
IV.—MERCHANTS' ASSOCIATION:	
1. All India Federation of Cloth & Yarn Dealers' Association BOMBAY.	Mr. Gordhandas G. Morarji.
2. Bombay Country Fancy & Grey Piecegoods Merchants' Association, BOMBAY.	1. Mr. Raghavji Vallabhdas Kapadia. 2. Mr. Gordhandas Vandravan.
3. Bombay Piecegoods Native Merchants' Association, BOMBAY.	1. Mr. Navnitlal Lallubhai Shah. 2. Mr. Himatlal Muni. 3. Mr. N. C. Munsiff.
4. Federation of Bombay Retail Cloth Dealers' Association. BOMBAY.	1. Mr. Hamid Khan Kazi. 2. Mr. K. M. Shanbag.
5. Maskati Cloth Markets Association, AHMEDABAD.	1. Mr. Trikamlal Mahasukhram. 2. Mr. Ramanlal Fakirchand Mashruwala. 3. Mr. A. S. Thakore. 4. Mr. Chandulal B. Satia (M.L.C., Bombay).
Also present:	Mr. M. R. Kazimi, Director of Cloth, Office of the Textile Commissioner, Govt. of India.
7th May 1948—11 A.M.	
V.—CONSUMERS:	
1. Mr. Babubhai Patel, M.L.A., NADIAD.	
12th May 1948—3 P.M.	
2. Mr. M. Ananthasayanam Ayyangar (M.L.A. Central), CHITTOOR.	
Also present:	Mr. M. R. Kazimi, Director of Cloth, Office of the Textile Commissioner, Govt. of India (on 7th May 1948 only).
7th May 1948—4.15 P.M.	
VI.—RAW COTTON SUPPLIERS:	
1 East India Cotton Association, BOMBAY.	1. Sir Purshotamdas Thakurdas, K.B.E., C.I.E. 2. Mr. Madanmohan Ruia. 3. Mr. C. M. Parekh.

APPENDIX VII (A).

Classification of composite Mills into groups according to the number of looms and spindles.

Looms.

Zone	Below 250	250 to 500	500 to 1,000	1,000 to 2,000	2,000 to 2,500	Above 2,500	Total
BOMBAY ZONE							
AHMEDABAD AREA							
Spindles—							
Below 10,000	..	..	..	..	..	..	..
10,000 to 20,000	..	11	4	..	..	..	15
20,000 to 40,000	..	7	33	1	..	..	41
40,000 to 80,000	..	..	1	3	..	..	4
80,000 to 1,00,000	..	..	..	..	..	..	..
Above 1,00,000	..	..	..	..	1	..	1
BOMBAY CITY							
Spindles—							
Below 10,000	..	..	..	..	..	..	..
10,000 to 20,000	..	3	..	..	..	..	3
20,000 to 40,000	1	..	12	4	1	..	18
40,000 to 80,000	..	1	9	20	1	..	31
80,000 to 1,00,000	..	..	..	1	1	1	3
Above 1,00,000	..	..	..	..	.	1	1
REST OF THE ZONE							
Spindles—							
Below 10,000	2	1	..	..	..	..	3
10,000 to 20,000	1	11	1	..	..	..	13
20,000 to 40,000	..	3	11	1	..	..	15
40,000 to 80,000	..	..	1	4	..	..	5
80,000 to 1,00,000	..	..	..	..	..	..	..
Above 1,00,000	..	..	..	..	..	..	..

Looms—*contd.*

Zone	Below 250	250 to 500	500 to 1,000	1,000 to 2,000	2,000 to 2,500	Above 2,500	Total
BIHAR ZONE							
Spindles—							
Below 10,000	8	..	..	..	..	..	8
10,000 to 20,000	..	3	2	..	..	..	5
20,000 to 40,000	..	1	4	..	..	..	5
40,000 to 80,000	..	..	2	1	..	..	3
80,000 to 1,00,000	..	..	..	..	..	..	..
1,00,000 & above	..	..	..	..	..	..	..
PUNJAB ZONE							
Spindles—							
Below 10,000	3	1	..	..	..	..	4
10,000 to 20,000	1	1	..	..	..	..	2
20,000 to 40,000	..	2	..	..	..	..	2
40,000 to 80,000	..	..	..	1	..	..	1
80,000 to 1,00,000	..	..	..	..	..	..	..
1,00,000 & above	..	..	..	..	..	..	..
RAJPUTANA ZONE							
Spindles—							
Below 10,000	2	..	..	..	..	..	2
10,000 to 20,000	..	3	1	..	..	..	4
20,000 to 40,000	..	2	..	..	..	..	2
40,000 to 80,000	..	..	..	..	..	..	..
80,000 to 1,00,000	..	..	..	..	..	..	..
1,00,000 & above	..	..	..	..	..	..	..
WESTERN INDIA STATES ZONE							
Spindles—							
Below 10,000	..	..	..	..	..	..	..
10,000 to 20,000	1	5	..	..	..	..	6
20,000 to 40,000	..	..	2	..	..	..	2
40,000 to 80,000	..	..	..	..	..	..	..
80,000 to 1,00,000	..	..	..	..	..	..	..
1,00,000 & above	..	..	..	..	..	..	..

Looms—*concld.*

Zone.	Below 250	250 to 500	500 to 1,000	1,000 to 2,000	2,000 to 2,500	Above 2,500	Total
CENTRAL INDIA STATES ZONE							
Spindles—							
Below 10,000	..	1	..	..	..	..	1
10,000 to 20,000	..	5	1	..	..	..	6
20,000 to 40,000	..	..	3	2	..	..	5
40,000 to 80,000	..	..	..	..	..	..	..
80,000 to 1,00,000	..	..	..	..	..	..	..
1,00,000 & above	..	..	..	..	..	..	..
SOUTH ZONE							
Spindles—							
Below 10,000	1	..	..	..	..	..	1
10,000 to 20,000	1	3	..	..	..	..	4
20,000 to 40,000	5	3	2	1	..	..	11
40,000 to 80,000	..	2	1	1	..	..	4
80,000 to 1,00,000	..	..	..	..	..	..	..
1,00,000 & above	..	..	..	..	..	1	1
HYDERABAD ZONE							
Spindles—							
Below 10,000	..	..	..	..	..	..	..
10,000 to 20,000	1	3	..	..	..	..	4
20,000 to 40,000	..	..	2	..	..	..	2
40,000 to 80,000	..	..	..	..	..	..	..
80,000 to 1,00,000	..	..	..	..	..	..	..
1,00,000 & above	..	..	..	..	..	..	..
C. P. ZONE							
Spindles—							
Below 10,000	..	..	..	..	..	..	..
10,000 to 20,000	1	..	..	..	..	..	1
20,000 to 40,000	1	3	2	..	..	..	6
40,000 to 80,000	..	..	1	..	..	..	1
80,000 to 1,00,000	..	..	..	..	..	..	..
1,00,000 & above	..	..	..	1	..	..	1

Looms—*contd.*

Zone	Below 250	250 to 500	500 to 1,000	1,000 to 2,000	2,000 to 2,500	Above 2,500	Total
U. P. ZONE							
Spindles—							
Below 10,000	..	..	..	..	..	..	..
10,000 to 20,000	1	2	..	..	..	..	3
20,000 to 40,000	1	..	3	1	..	..	5
40,000 to 80,000	1	..	..	2	..	..	3
80,000 to 1,00,000	..	..	..	..	..	..	..
1,0,000 & above	..	..	..	1	..	..	1

APPENDIX VII (B).

Classification of spinning mills into groups according to the number of spindles.

Zone	Below 10,000	10,000 to 20,000	20,000 to 40,000	40,000 to 80,000	1,00,000 and above.
I Bombay Zone—					
(a) Ahmedabad area : ..	..	..	2	..	..
(b) Bombay city :	..	1	2	..	..
(c) Rest of Bombay Zone : ..	2	4	..	1	..
II Western India States	..	1	..	..	..
III Central India States	1	1	..	..	..
IV Rajputana Zone	1	..	..	..	..
V Punjab Zone	2	..	..	..	..
VI U.P. Zone	2	3	..	1	..
VII Bengal Bihar Zone ..	2	1	2	..	..
VIII South Zone	23	12	9	2	1

APPENDIX VIII.

CEILING PRICES FOR CLOTH.

Schedule of Realisation Multipliers for all Cloth.

Counts					Realisation Multiplier in Annas per lb. of yarn	Count variation	Cotton Adjustment
Group	Warp	Weft	Reed	Picks			
1	2	3	4	5	6	7	8
Indian Cotton						Up or down in annas per count.	
I	6	6	28	28	9·20		No allowance for imported cotton is allowed even if it is used in any cloth linked to these Groups. The following are, however, the exceptions :—
II	8	6	32	32	13·00		
III	14	10	40	40	18·00		
IV	14	14	44	44	19·20	·20	A. For (i) very specialised qualities, and (ii) qualties intended for export only to be distinctly specified in the price notification by separate export trade marks and/or numbers, the Chairman has the absolute discretion, in consultation with Mr. T. V. Baddeley and Mr. J. C. Lancashire, to allow the actual difference between any imported cotton and Indian cotton of appropriate mixing for the counts of yarn spun
V	20	20	52	52	24·50		
VI	20	30	54	54	26·25		
VII	30	30	56	56	31·50	·30	
VIII	30	40	62	62	37·60		
Imported cotton and carded							B. For cloth with warp count 30s and over and reed 56 and over an allowance of 4 annas per lb. of yarn for actual imported cotton used will be given.
IX	40	40	66	66	46·90		(a) if combed yarn is used increase multiplier by 4·0;
X	40	50	68	68	48·10	·40	(b) if Indian cotton is used reduce multiplier by 6·00.
XI	40	60	70	70	52·20		(c) In cases of qualities manufactured from warp yarn of counts 42s and over spun from Giza 7 or equivalent Egyptian*.
XII	50	60	72	72	60·50		
XIII	60	80	74	74	79·00	·40	if uncombed yarn is used reduce the multiplier by 4·00.
XIV	70	90	78	78	88·00		
XV	80	100	82	82	97·40	·40	if uncombed yarn is used reduce the multiplier by 4·00.
XVI	100	120	90	90	141·02	1·00	

* Types excluding Sudans and Uppers, and linked to Groups IX to XII inclusive, an additional 6 as. per lb. will be allowed for the quantity of such cottons actually used in the mixing, if the mill proves to the satisfaction of the Panel Member and the Chairman that such cotton have been used in the mixing.

METHOD OF LINKING:

1. All varieties of cloth manufactured by mills should be linked with one or the other of the Groups mentioned in the above Schedule.

2. The linking shall be done according as the total of the counts of warp and weft in the cloth is nearer approximation to the total of the counts of warp and weft yarn specified in columns 2 and 3 against any of the groups in the Schedule with the exception that all cloths with warp above 34s count and made from imported cotton shall be linked to Group IX.

3. The basic adjustment between counts for cloth in each combination of counts shall be arrived at for the composite counts and is to be applied to the total weight of yarn in warp and weft including 5 per cent. allowance for wastage and coarseness of counts. In other words, yarn weight in both warp and weft of any cloth should be worked out on the actual counts of yarn used in the cloth and the 5 per cent. allowance for wastage should be added.

4. The following changes in the realisation multiplier for variation in counts of warp and weft, reed and picks and type of cotton, etc., are to be made:—

A.—COUNT VARIATION: See column 7 in the above Schedule.

B.—TYPE OF COTTON: See column 8 in the above Schedule.

C.—(i) VARIATION IN REEDS : For every upward variation of 4 reeds the multiplier specified in column 6 in the above Schedule of multipliers after adjustment of count variation if any shall be increased by 1|2 per cent.

(ii) VARIATION IN PICKS : For every upward or downward variation of 4 picks, the multiplier specified in column 6 in the above Schedule of multipliers after adjustment of Count variation if any shall be increased or decreased by 1 per cent.

D.—TWISTED YARN QUALITIES:

(a) Dosuti : For such qualities which are both double drawn in the warp and double wound in the weft, the appropriate multiplier after adjusting the count, reed and pick allowances shall be decreased by 10 per cent. with a minimum of 3 annas.

(b) Dosuti : For all such qualities with double drawn in the warp, or two ply weft the appropriate multiplier after adjusting the count, reed and pick allowance shall be decreased by 5 per cent with a minimum of 1½ as.

(c) Twisted Yarn Qualities : For all qualities manufactured out of double or more twisted yarn, the appropriate multiplier after adjusting the count, reed and pick allowances shall be decreased by 5 per cent. (with a minimum of 1½ annas) in case both the warp and weft yarn are twisted and by 2½ per cent. (with a minimum of 3|4 annas) in case either warp or weft yarn is twisted.

E.—WIDTH ALLOWANCE : The above Schedule applies fairly uniformly for all grey qualities of 30 in. and over and for all bleached, dyed and finished qualities of width 28 in. and over. For widths lower than 30 in. grey or 28 in. bleached, dyed or finished, the multipliers given in the above Schedule shall be increased by 1.00 except in the case of Dhoties and Sarees for which increase shall be 2.00 (splits excluded in all cases).

SCHEDULE OF BLEACHING, DYEING, FINISHING AND OTHER CHARGES.

(Total weight of yarn means actual yarn weight plus 5 per cent. for wastage and coarseness of count).

1. Bleaching & Finishing charge—

Groups 1 to 6	..	3¼ as. per lb. of total weight of yarn.
Groups 7 and above	..	4 as. per lb. of total weight of yarn.
2. Backfilling charges	..	½ as. per lb. of total weight of yarn.
3. Finishing charges for cloths 60s warp and over.		¼ as. per lb. of total weight of yarn.
4. Scouring charge	..	1½ as. per lb. of total weight of yarn.

5A. Yarn dyeing charges for Fast to Bleach shades (Vat colours)—

(a) Border yarn for Sarees & Dhoties only:	
(i) Very dark colours ...	32 as. per lb. of dyed yarn used in border only.
(ii) Dark, Medium & Light colours.	16 as. per lb. of dyed yarn used in border only.
(b) Dyed yarn used in Sucies and shirtings only.	13½ as. per lb. of dyed yarn used for all shades.

(*Note.*—This dyeing charge will only be given in cases of qualities of cloth specified linked to Group VIII and above in which the reed used is 60s and over. Otherwise, the appropriate charge according to the shades of dyed yarn used will only be given).

(c) Fast dyed yarn used in qualities other than those mentioned in (a) and (b)—

(i) Dark shades	..	15 as. per lb.
(ii) Medium shades	..	10 as. per lb.
(iii) Light shades	..	6 as. per lb.

B. Yarn dyeing charges for Sulphur colours—

(i) Dark shades	..	6 as. per lb.
(ii) Medium & Light shades	..	3 as. per lb.

6A. Piece dyeing charges for fast to bleach shades (Vat colours)—

(a) Dark shades	..	15 as. per lb. of yarn.
(b) Medium shades	..	10 as. per lb. of yarn.
(c) Light shades	..	6 as. per lb. of yarn.

B. Piece dyeing charges for Sulphur colours—

(a) Dark shades	..	6 as. per lb. of yarn.
(b) Medium & Light shades	..	3 as. per lb. of yarn (applicable only to export qualities).

C. Piece dyeing charges for Napthol colours—

(i) 1 per cent. shades	..	2½ as. per lb. of yarn.
(ii) 2 per cent. shades	..	5 as. per lb. of yarn.
(iii) 3 per cent. and more shades.		7½ as. per lb. of yarn.

D. Other piece dyeing charges—

(a) Mineral Khaki dyeing	..	5½ as. per lb. of yarn.
(b) Vegetable Khaki dyeing	..	3 as. per lb. of yarn.
(c) Hydron Blue dyeing	..	10 as. per lb. of yarn.
E. Waterproofing	..	3 as. per lb. of yarn.

7. Piece and Yarn dyeing charges for commercial quality, direct or basic colour—

(a) Dark shades	..	5 as. per lb. of dyed yarn used in the body or border of cloth.
(b) Medium & Light shades	..	4 as. per lb. of dyed yarn used in the body or border of cloth.

8. Cotton dyeing charges—

(a) Fast and Direct colour dyed: The dyeing charges will be allowed on the basis of the shade of yarn spun from dyed cotton and used in the cloth irrespective of the percentage of dyed cotton used in the yarn. In other words, the yarn spun from dyed cotton will be compared with the shade card to find whether it falls under the category of light, medium or dark and the appropriate dyeing charge will be given for the total weight of yarn spun from dyed cotton.

(b) Sulphur colours: 8 as. per lb. of actual cotton dyed used in the yarn.

Note:—(i) The dyeing charges provided above will only be allowed after comparing the shades of dyed yarn or cloth with the shades of dyed yarn patterns already sent to mills and Panel Members. No dyeing charges will be allowed for shades lighter than the light shades in the pattern covers sent to mills and Panel Members.

(ii) All dyeing charges in paragraphs 5 to 8 are inclusive of any charge for bleaching and scouring which may be necessary before dyeing.

9. Mercerising charge—

(a) 2 as. per lb. for cloth 4 ozs. and heavier per square yard.

(b) 3 as. per lb. for cloths lighter than 4 ozs. per square yard.

(c) 3 as. per lb. for yarn mercerised for all counts.

10. Charges for roller printing in Fast to Bleach colours of all cloth of width 26 in. and under—

(i) For 25 per cent. of printed surface or more:

(a) Single colour printing	..	2¼ as. per yard.
(b) Double colour printing	..	4½ pies more than (a).
(c) Three colour printing	..	9 pies more than (a).

(d) For every additional colour, add 4½ pies per yard extra.

(ii) For less than 25 per cent. of printed surface, one anna and nine pies per yard. For every additional colour 3 pies more per yard.

Note:—(1) For cloths of width over 26 in., take proportionate charges on the basis of the charges for widths 26 in. and under.

(2) The printing charges given are inclusive of the charge for any bleaching or scouring of the grey material before printing.

(3) Where bleached or scoured cloth is dyed or printed, the charges specified above shall be reduced by 6 pies per yard in every case. This applies only to outside processors who are dyeing or printing scoured or bleached or grey cloth delivered to them by dealers. Mills who are manufacturing grey cloth, scour or bleach it before printing or dyeing and subsequently print or dye the same are required to calculate the prices for the printed and dyed material by adding to the grey prices the appropriate printing or dyeing charges specified above.

11. Dual Processing—

(i) In cases where (a) cloth containing cotton dyed yarn is piece dyed, and (b) piece dyed cloth is subsequently printed, no charges for piece dyeing will be permitted.

(ii) No piece dyeing charges will be allowed in cases where cloth, containing more than 20 per cent. of dyed yarn in the warp and/or weft, is piece dyed.

12. Raising charges—

(i) One passage two sides ..	3 pies per lb.
(ii) Two passages one side ..	3 pies per lb.
(iii) Three passages or more, two sides ..	6 pies per lb.

13A. Dobby Allowance for borders in Dhoties and Sarees—

(i) Upto 12 shafts .. (a) 1½ as. per lb. for 40s. warp and below.
(b) 3 as. per lb. for counts above 40s warp.

(ii) From 13 shafts to 32 shafts—Double the charges in (i).

(iii) From 33 shafts and above—Three times the charges in (i).

B. Allowance for Ground Dobby Weave—

Warp counts	Charges per lb.		
	Up to 12 shafts	From 13 to 32 shafts	33 shafts and above.
	As.	As.	As.
15s and below	¾	1½	2¼
Between 16s and 34s	1½	3	4½
Between 35s and 59s	3	6	9
60s and above	4½	9	13½

14. Jacquard Allowance—

Warp counts	120 needles and less	Charges per lb.		Above 400
		Above 120 and upto 240	Over 240 & upto 400	
	As.	As.	As.	As.
15s and below	3	3¾	4½	4½
Between 16s and 34s	6	7½	9	10½
Between 35s and 59s	9	11¼	13½	15¾
60s and above	12	15	18	21

(*Note*:—The allowance of Dobby and Jacquard specified in paragraphs 13 and 14 above are to be added on the basis of weight of yarn in warp and border, exclusive of weight of weft yarn, but with the 5 per cent. allowance for wastage).

15. Dropbox Allowance—

Warp count	Charges per lb.	
	2 and 3 shuttles Annas.	4 shuttles and above. Annas.
15s and below	4	5
Between 16s & 34s	8	10
Between 35s & 59s	12	15
60s ond above	16	20

(*Note*:—The Dropbox allowance is to be taken on the total weight of yarn in the piece).

16. Leno Weave Allowance—

(a) Doups per inch in reed not exceeding 3 6 9 12 14 16 18
Allowance—per inch of grey width in annas per 24 yards piece .. .4 .6 .8 1.0 1.2 1.4 1.6

The maximum number of doups per inch in the reed for which the allowance will be given are:

(b) Resultant counts 10*s* to 16*s* max: 14 doups per inch.
17*s* to 28*s* max: 16 doups per inch.
29*s* to 40*s* max: 18 doups per inch.

(*Note*:—(1) The term "resultant counts" is to be applied to the yarn passing through the doups. This is usually two or three fold yarn.

(2) In the case of patterned lenos, i.e., when a part of the cloth is leno weave and part some other weave the number of doups per inch is to be determined by dividing the total grey width by total number of doups in the reed.

(3) When the number of doups exceeds the number mentioned in sub-paragraph (b) the allowance given will be limited to the weight of yarn based on the number of ends per inch in sub-paragraph (b).

17. Dhoties and Sarees allowance—

Border—(1) For grey or bleached double yarn used in the borders of dhoties and sarees, the following charges per lb. of border yarn used are to be taken:—

	Rs. a. p.
2|20	1 12 0
2|30s (Indian Cotton)	2 4 0
2|30s (Imported Cotton)	2 9 0
2|40s	3 2 0
2|50s	3 14 0
2|60s Uncombed	4 10 0
2|60s Combed	4 14 0
2|80s Uncombed	6 0 0
2|80s Combed	6 4 0

(2) For grey or bleached single yarn used in the borders of dhoties and sarees, the multiplier for the appropriate single yarn provided in the Schedule of Multipliers increased by 2 annas per count shall be taken.

(3) For dyeing and mercerising, add appropriate charges provided in the preceding paragraphs.

Note:—A. For double yarn of counts other than those specified above, average proportionate charges are to be taken.

B. The charges specified in this paragraph are to be applied in respect of the total weight of warp yarn used in the border; and for arriving at the price of the full piece, the weight of the border yarn should be deducted and only the weight of the ground cloth taken for purposes of linking with the realisation multiplier given in the Schedule.

C. In addition to the above, the following compensatory allowance shall be added to the final prices of dhoties and sarees for loss of production:—

(a) 3 pies per yard in the case of dhoties and sarees manufactured from 16s warp and over and linked to Groups upto and including Group VIII.

(b) 6 pies per yard in the case of dhoties and sarees linked with Groups IX and above.

These compensatory allowances will only be given in respect of dhoties and sarees, the widths of which are not less than 39 in. grey or 36 in. bleached.

18. Grandrelle Yarn—

(i) One end grey and one end colour to be treated for dyeing charge as single yarn in receipt of weight, and half the dyeing charges appropriate to the depth of shade will be allowed on the total weight.

(ii) If both ends are coloured in different shades, the full weight will be taken, and the dyeing charge on full weight will be allowed at a rate which will be average of the rates appropriate to each dyed shade.

19. Artificial Silk Qualities:—

(a) Single artificial silk, Rs. 10-12-0 per lb. of artificial silk.

(b) Double artificial silk, Rs. 11-8-0 per lb. of artificial silk.

For dyeing charge add Re. 1-4-0 per lb. of artificial silk in the case of fast dyeing and 10 annas per lb. in the case of direct dyeing.

20. (a) For border print on both sides .. .. ½ anna per yard extra.

(b) For single border print ¼ anna per yard extra.

21. Allowance for Drills .. ¾ anna per lb. of yarn.

Note:—Twills are to be treated as plain cloth and no additional charges will be given even if woven on bobby or tappet.

22. Terry motion allowance .. 1 anna per lb. of yarn over and above the dobby allowance.

23. Felt Calendering Allowance ½ anna per lb.

24. Beetling Allowance .. ½ anna per lb.

25. Shadow Poplin Allowance

(a) An allowance of ½ anna per yard extra will be allowed if the quantity of reverse twist yarn in the warp is 50 per cent. and more of the total weight of warp yarn. In other cases, the allowance will be ¼ anna per yard. These allowances will only be given in cases where the quality is manufactured with warp counts of yarn 35s and over.

(b) The allowance will not be given in the case of (i) split qualities and (ii) in qualities the widths of which are less than 28 in. finished.

26. For Bleached Mulls not containing any coloured yarn in the body, of 46 in. width and more produced from 60s warp and over and/or linked to Group 12 and above, an additional allowance of ½ anna per yard will be given.

27. Compensatory coal allowance for mills wherever situated, whose motive power is entirely or preponderatingly produced from coal: In the case of all grey qualities which have undergone no further processing other than calendering, the appropriate grey multiplier after adjustment of variation of counts, reeds and picks, if any, shall be increased by 5 per cent. (This allowance is not admissible in the case of any cloth which is either scoured, bleached, dyed or printed, with or without mercerising).

28. Allowance of Handkerchiefs: (i) Herm stitched: 25 per cent. above the final price arrived at on the basis of the schedule; (ii) Ordinary stitched: 15 per cent. above the final price arrived at on the basis of schedule.

Note:—These charges are inclusive of ironing and packing.

29. Yarn in selvedges used in cloths other than Patti Mulls and Voiles: Double or single yarn if any, used in selvedges of cloth other than Patti Mulls and Voiles should only be treated as falling within the warp yarn used in the cloth and will not be permitted to be taken as border yarn and will not be allowed the special charges for border yarn.

30. Tapestries and Furnishing Fabrics: Ceiling prices for these will be fixed by the Chairman in consultation with Mr. T. V. Baddeley, and Mr. J. C. Lancashire. Forms of manufacturing particulars are, therefore, required to be submitted by the mills direct to the Chairman, together with samples of the qualities.

Schedule for Calculation of Blanket Ceiling Prices.

Warp	Weft	Reed	Picks	Realisation multiplier per lb. of yarn (in annas).
14s	2s	36	20	10.40

Note:—(a) No adjustment is to be made for variation in counts of weft below 2s. Adjustment for variation in counts of warp below and above 14s, and of weft above 2s, is to be made on the same basis as provided in the Schedule.

(b) For variation in reed and pick, same as in the Schedule.

(c) The multiplier is to be applied for all light and medium dyed blankets, no extra charge being given for dyeing.

(d) In case of Sulphur Dyed cotton blanket, an extra charge of 2½ annas per lb. to be taken.

(e) No heading or hemming charges to be taken.

(f) Raising charges half an anna per lb.

APPENDIX IX.

Statement showing the rates of depreciation relating to the **16** *costed mills.*

Serial No.	Name of Mill	Percentage of depreciation written off to original block value for the year									
		1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
1	2	3	4	5	6	7	8	9	10	11	12
	BOMBAY										
1	The Standard Mills Co., Ltd.	2·16	2·09	2·77	3·11	2·05	2·04	2·03	1·68	2·00	Not avil-able
2	The Madhusudan Mills, Ltd.	6·21	6·02	5·49	10·87	7·08	5·95	5·28	5·03	5·03	4·14
3	The Raghuvanshi Mills, Ltd.	7·73	*Nil*	*Nil*	11·19	7·14	16·44	7·05	*Nil*	*Nil*	2·46
4	The Modern Mills, Ltd.	0·02	·04	·04	11·47	14·62	10·76	9·67	7·00	5·28	Not avail-able
	AHMEDABAD										
5	The Hathising Mfg. Co., Ltd.	——Not available——			*Nil*	*Nil*	8·23	2·96	1·62	3·22	Do.
6	Rohit Mills, Ltd.	4·83	8·88	2·29	5·27	6·30	5·08	4·29	4·12	4·91	Do.
7	The New Swadeshi Mills of Ahmedabad, Ltd.	——Not available——			——Not available——				6·85	5·42	4·24

APPENDIX IX—*contd.*

Serial No.	Name of Mill	Percentage of depreciation written off to original block value for the year									
		1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
1	2	3	4	5	6	7	8	9	10	11	12
	SOUTH INDIA										
8	The Somasundaram Mills, Ltd.	Not available				7·66	9·08	8·76	7·57	7·34	Not available
9	The Kaleeswarar Mills, Ltd..	2·39	2·39	2·12	3·25	3·10	3·26	2·99	2·80	3·24	Do.
10	The Pankaja Mills, Ltd.	7·68	4·60	4·39	7·25	6·64	6·31	5·65	5·06	4·42	Do.
11	Asher Textiles	*Nil*	2·33	8·49	4·53	8·42	7·91	6·41	5·59	4·96	4·24
	BENGAL										
12	The Bangeswari Cotton Mills, Ltd.	3·19	3·47	4·29	4·28	4·13	3·84	3·63	3·40	3·06	Not available
13	The Mohini Mills, Ltd.	Not available	4·14	4·48	5·81	12·37	9·15	5·54	5·50	5·28	Do.
	CENTRAL INDIA										
14	R. S. Reckchand Gopalas Mohta Spg. & Wvg. Mills, Ltd.	Not available								4·81	*Nil*
15	The Rajkumar Mills, Ltd.	Not available	·91	*Nil*	10·96	10·87	9·72	*Nil*	3·14	3·11	Not available
	UPPER INDIA										
16	Cawnpore Textiles, Ltd.	Do.	3·56	3·32	*1·93	7·26	6·36	7·67	6·10	6·30	6·32

*This is the provision made in the second half of the year ending 30th September. Balance Sheet for the first half year is not available.

APPENDIX X.

Statement showing the rates of depreciation relating to (a) Bombay mills; and (b) Ahmedabad mills.

Year	Bombay Mills		Ahmedabad Mills
	Percentage of Depreciation written off to original block value.	Percentage of Depreciation at Income-Tax rates to original block value.	Percentage of Depreciation written off to original block value.
1	2	3	4
1938	2·35	Not available	3·13
1939	1·66	Do.	3·87
1940	2·56	5·28	3·71
1941	5·58	5·36	6·51
1942	7·15	4·66	5·31
1943	6·00	4·13	4·98
1944	4·03	3·73	4·47
1945	3·83	3·80	4·13
1946	4·42	Not available	3·91
Annual Average.	4·20	4·48	4·45

APPENDIX XI.

Statement showing the amounts of B. P. T. if any, payable by the costed mills at the current taxation rates on the basis of—
(i) the financial data for 1946; and (ii) a net profit at the rate of 6 per cent. on the original block.

Items	Madhusudan	Modern	Raghuvanshi	Standard	Hathising	New Swadeshi	Rohit	Cawnpore Textiles
1	2	3	4	5	6	7	8	9
1. Paid up Share Capital	24,30,000	24,25,370	20,00,000	36,00,000	2,22,500	14,49,625	24,05,000	15,00,000
2. Reserves	7,12,750	21,75,000	22,22,593	49,75,584	99,500	1,50,000	4,72,100	14,50,000
3. Capital for calculation of abatement	31,42,750	46,00,370	42,22,593	85,75,584	3,22,000	15,99,625	28,77,100	29,50,000
4. Abatement	2,00,000	2,76,022	2,53,356	5,14,565	2,00,000	2,00,000	2,00,000	2,00,000
5. Gross Block	19,87,076	38,37,742	41,52,009	74,82,811	12,43,120	21,32,155	43,77,533	35,73,477
6. Profit @ 6% of Block	1,19,225	2,30,265	2,49,121	4,48,969	74,587	1,27,929	2,62,652	2,14,409
7. Profit for calculation of E.P.T. on the basis of (6)	*Nil.*	*Nil.*	*Nil.*	*Nil.*	*Nil.*	*Nil.*	62,652	14,409
*8. B. P. T. payable @ 10% of (7) ..	*Nil.*	*Nil.*	*Nil.*	*Nil.*	*Nil.*	*Nil.*	6,265	1,441

Items	Rajkumar	Reckchand Mohta	Asher Textiles	Kalee-swarar	Pankaja	Soma-Sundaram	Bangeswari	Mohini	Average for each of the 16 costed mills
	10	11	12	13	14	15	16	17	18
1. Paid up Share Capital	20,50,210	48,00,220	7,99,946	6,50,000	6,00,000	6,50,000	10,25,338	38,98,331	19,25,409
2. Reserves	13,02,550	*Nil.*	6,45,176	22,71,972	8,97,500	90,000	1,32,601	17,35,952	11,89,580
3. Capital for calculation of abatement	33,52,760	48,00,220	14,45,122	29,21,972	14,97,500	7,40,000	11,57,939	35,33,921	31,14,989
4. Abatement	2,01,166	2,88,013	2,00,000	2,00,000	2,00,000	2,00,000	2,00,000	2,12,035	2,00,000
5. Gross Block	64,37,314	51,94,100	11,16,193	38,95,629	22,58,699	11,69,210	14,44,391	48,73,701	34,48,448
6. Profit @ 6% of Block	3,86,239	3,11,646	66,972	2,33,738	1,35,522	70,153	86,663	2,92,422	2,06,907
7. Profit for calculation of B. P. T. on the basis of (6)	1,85,073	23,633	*Nil.*	33,738	*Nil.*	*Nil.*	*Nil.*	80,387	6,907
*8. B. P. T. payable @ 10% of (7) ..	18,507	2,363	*Nil.*	3,374	*Nil.*	*Nil.*	*Nil.*	8,039	691

EXPLANATORY NOTE :—

(1) The statement is based on the mills Balance Sheets for 1946.
(2) " Paid up Share Capital " is inclusive of premium on shares.
(3) " Reserves " is exclusive of depreciation reserve and taxation reserve. It, however, includes E.P.T. reserves wherever figures are available.
(4) Capital for calculation of abatement (item 3) is the sum of items 1 and 2. Where, however the investment exceeds loans, the excess has been deducted from the sum of items 1 and 2.
(5) Abatement allowed is 6% of Capital referred to at (4) above or Rs. 2,00,000 whichever is greater.
(6) Items 6 to 8 are based on the assumption that the net profit is 6% of the block.

*The incidence in the case of the 6 mills will be as follows :—
$2\frac{1}{2}$%, $1\frac{1}{4}$%, 5%, $\frac{3}{4}$%, $1\frac{1}{2}$%, $2\frac{1}{2}$% on the profits respectively.

APPENDIX XII.

Madura Mills Company Limited.

CIRCULAR.

With the removal of price control and price stamping of goods, Government is exacting a Levy on all Mills in the knowledge that Mill prices will be revised upwards.

2. In common with other Mills we shall have to pay the Levy to Government, and we are increasing our prices for all outstanding orders yet to despatch regardless of the contract month. The Levy apart, the prices agreed in January are now completely uneconomic owing to the very considerable rise in the prices for all Cottons, Indian and Imported.

3. The increases are approximately 25 per cent. in the case of Indian Yarns and 50 per cent in the case of Egyptian qualities. We enclose a complete list of our revised prices. Doubling charges remain unchanged but our revised Coning charges are Rs 2.|- per 10 lbs. up to and including 30s and Rs. 3|- for counts over 30s. The previous Coning charges have been unremunerative for some time.

4. It is now of no consequence whether goods are price stamped or not as all outstandings will be invoiced at the revised prices.

We do not wish to hold up despatches and are therefore invoicing at the new prices forthwith. We shall be glad, however, if you will confirm our action by wire on receipt of this letter.

5. In this general connection, we trust it will be appreciated that price control, once the yarn had left the Mills, has been ineffective for sometime now, and we are aware that our yarn has been selling at very large differences over the ex-mill prices agreed in January.

For and on behalf of

MADURA MILLS COMPANY LIMITED.

For A. & F. HARVEY Ltd.,
Sd.|-
Director
Managers.

MADURA,
21*st April* '48.

(True Copy)

MADURA MILLS COMPANY LIMITED

Yarn ex-mill prices.

Counts.	Prices per 10 lbs.	
	Single.	Twofold.
	Rs. As. Ps.	Rs. As. Ps.
Indian Cotton—		
4s	13 6 0	14 4 0
6s	13 10 0	14 8 0
8s	13 14 0	14 12 0
10s	14 2 0	15 6 6
12s	14 6 0	15 10 6
13s	14 8 0	15 12 6
14s	15 1 0	16 5 6
16s	16 8 0	18 6 6
17s	16 10 0	18 9 9
18s	16 12 0	18 13 0
19s	16 14 0	19 0 3
20s	17 0 0	19 3 6
22s	17 10 0	20 1 0
24s	18 0 0	20 10 6
26s	20 0 0	22 10 6
28s	20 4 0	22 14 6
30s	20 8 0	23 3 0
32s	20 12 0	23 9 6
36s	24 4 0	27 5 9
40s	25 0 0	28 6 0
42s	25 6 0	28 14 6
44s	25 12 0	29 7 0
Foreign Egyptian—		
60s carded	51 0 0	56 8 0
80s combed	65 0 0	73 12 0

Coning and/or cheesing charges including casepacking { Rs. 2-0-0 per 10 lbs. upto and including 30s. / Rs. 3-0-0 per 10 lbs. over 30s.

For and on behalf of
MADURA MILLS COMPANY LIMITED,
Pro: A. & F. HARVEY Ltd.,
Sd.|-
MANAGERS

MADURA,
21*st April* '48.

(True Copy)

Ls/PITTB—1000—10-2-49—GIPS

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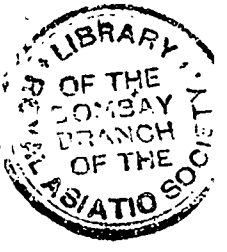

REPORT OF THE INDIAN TARIFF BOARD

ON THE

MOTOR VEHICLE BATTERY INDUSTRY

BOMBAY
1948

PRINTED IN INDIA FOR THE MANAGER OF PUBLICATIONS DELHI
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REPORT ON THE MOTOR VEHICLE BATTERY INDUSTRY

Application for protection and reference to the Board.

The Standard Batteries, Ltd., Bombay, in its letter No. 1701|46 (KGP. NAS), dated the 27th April 1946, addressed to the then Department of Commerce, Government of India, asked for Governmental assistance to the motor vehicle battery industry as follows :— (i) reduction in the control price of lead and other materials required for battery manufacture ; (ii) remission of duty on raw materials and machinery ; (iii) increase of import duty on batteries and plates to 100 per cent *ad valorem* ; (iv) ban on the import of batteries fitted as original equipment of motor vehicles ; and (v) discouragement of the establishment of battery manufacturing plants in India by foreign companies. The firm also asked that protection should be effective for 10 years, in the first instance. Similar applications for protection were made by the Estrela Batteries, Ltd., Bombay, in its letter dated the 19th May 1946, and the Amco Ltd., Bombay, in its letter dated the 29th May 1946. In a letter dated the 11th November 1946, the Maharatta Chamber of Commerce and Industries, Poona, also supported in general terms the case for protecting the motor vehicle battery industry. The application was at first turned down by Government on the ground that one of the principal component parts required in the building up of storage batteries, *viz.*, the container, was not being manufactured in India. But, on receiving an assurance from the principal applicant, namely, the Standard Batteries, Ltd., Bombay, that the plant and machinery required for the manufacture of containers had already been ordered from abroad and were on their way to India, Government reconsidered the application, and under the then Department of Commerce Resolution No. 218-T(55)|45, dated the 15th March 1947, read with paragraphs 2 and 7 of its Resolution No. 218-T(55)|45, dated the 3rd November 1945, and paragraph 4 of the Resolution bearing the same number, dated the 16th February 1946, remitted to the Tariff Board for investigation, the claim of the industry for assistance or protection.

Terms of reference.

2. Under the terms of reference contained in the Government of India Resolution dated the 3rd November 1945, the Board has to satisfy itself—

(i) that the industry is established and conducted on sound business lines ;

(ii) (a) that, having regard to the natural or economic advantages enjoyed by the industry and its actual or probable costs, it is likely within a reasonable time to develop sufficiently to be able to carry on successfully without protection or State assistance ; or

(b) that it is an industry to which it is desirable in the national interest to grant protection or assistance and that the probable cost of such protection or assistance to the community is not excessive.

Where a claim for protection or assistance is found to be established, that is, if condition (i) and condition (ii) (a) or (b) are satisfied, the Board may recommend—

(i) whether, at what rate and in respect of what articles, or class or description of articles, a protective duty should be imposed ;

(ii) what additional or alternative measures should be taken to protect or assist the industry ; and

(iii) for what period, not exceeding three years, the tariff or other measures recommended should remain in force.

In making its recommendations the Board has to give due weight to the interests of the consumer in the light of the prevailing conditions and also consider how the recommendations affect industries using the articles in respect of which protection is to be granted.

Method of inquiry.

3. (a) On the 17th March 1947, the Board issued a press communiqué inviting all firms, associations and persons interested in the industry, who desired their views to be considered by the Board, to submit their representations. Detailed questionnaires were issued to all known producers, importers, and consumers as well as to the Provincial Directors of Industries, all Chambers of Commerce and recognised Trade Associations. A list of those to whom questionnaires were issued and who submitted their replies is given in Appendix I. Mr. C. C. Desai, then a Member of the Board, visited the Amco factory at Bangalore on the 18th June 1947. The same factory was visited by Mr. P. V. R. Rao, Cost Accounts Officer attached to the Board, from the 7th to the 10th July 1947 and by Mr. S. D. Sunawala, who was then a Technical Adviser to the Board, on the 12th July 1947. The Standard Batteries' factory in Bombay was visited by Dr. Rama Varma, Assistant Secretary to the Board, together with the Technical Adviser and the Cost Accounts Officer, on the 27th June 1947.

(b) The hearing of oral evidence in this case, originally fixed for the 12th and the 13th August 1947, had to be postponed due to the resignation from the Board of Mr. C. C. Desai, President (Mr. Desai had been appointed President with effect from the 1st July 1947) and Dr. Nazir Ahmad, Member, of the Board, on their transfer elsewhere. When the reconstituted Tariff Board, with Mr. G. L. Mehta as President, Dr. H. L. Dey and Dr. B. V. Narayanaswamy Naidu as Members and Mr. M. Ahmadullah as Secretary, met in Bombay in November 1947, the inquiry was taken up. The President, Members and Secretary of the Board, and Mr. R. N. Kapur, Technical Adviser, visited the Standard Batteries' factory on the 27th November 1947. The President and Mr. Kapur also visited the Chloride Electrical Storage factory; and the Indian Batteries Manufacturing Co.'s factory, both at Calcutta, on the 2nd and the 4th December 1947 respectively. Mr. Kapur visited the Bharat Battery Manufacturing Company's factory at Calcutta on the 2nd December 1947. Standard and Amco batteries were costed by Mr. P. V. R. Rao with the help of the then Technical Adviser, Mr. S. D. Sunawala, and the present Technical Adviser, Mr. R. N. Kapur. A public inquiry was held and representatives of pro-

ducers, consumers and importers were examined in Bombay on the 10th and the 11th December 1947. A list of the persons who attended the inquiry and were examined is given in Appendix II.

History of the Industry.

4. (a) Attempts to manufacture batteries for motor vehicles were first made in 1931 by the Tropical Accumulators, Calcutta, then an unregistered firm. The firm was registered in 1936 and has continued to manufacture batteries since then. During the years from 1933 to 1939 a number of other factories, namely, Bharat Battery Manufacturing Company, Electro Chemical Industry, Indian Battery Manufacturing Company, Eastern Accumulator Company and Mozumdar Battery Co., sprang up in Calcutta. The concentration of the industry in the prewar period in Calcutta was rather remarkable. Outside Calcutta there was at that time only one firm in Bombay which started manufacturing battery plates in 1934 and later removed its factory to Bangalore in 1937. This company originally named as the General Accumulators Manufacturing Co., is now known as Amco Ltd. All these units, however, produced batteries on a small scale in the prewar period and their total output was quite inadequate to meet the indigenous demand. Consequently, the country's requirements were largely met from imports, mainly from the U.K. and the U.S.A. But the outbreak of war caused a heavy reduction in imports of motor vehicle batteries, and the Indian industry was therefore called upon to meet practically the entire demand of the Defence Services. Several new units came into existence while some of the old units put up additional plants. Government assisted this industry by granting import licences for battery-making plant and by securing a steady flow of raw materials required for the manufacture of batteries. During the war period, however, it was difficult to import containers from abroad, and there was only one factory, *viz.*, Messrs. A. K. Sarkar & Co. (now National Rubber Manufacturers, Ltd.), which had just started the production of containers on a small scale. In the circumstances, the indigenous industry was mostly engaged in the making of battery plates for replacement purposes and to some extent in rebuilding batteries by using salvaged containers. The more important firms which came into existence during this period are : (1) Estrela Batteries, Ltd., Bombay (1939), (2) Standard Batteries Ltd., Bombay (1943), and (3) Chloride Electrical Storage Co. (India) Ltd., Calcutta (1945). The last-named firm is a subsidiary of a British company of the same name which has been established in the U.K. for over 50 years. Its Indian factory was put up during wartime at the instance of the Defence Services for meeting the requirements of batteries in the eastern theatres of war. And it was granted War Project Co-ordination and Administrative Priority, No. 2, Project M-20, which considerably helped the firm in obtaining building materials and plant. But it could not actually start manufacturing batteries until after hostilities had ceased. At the present time it is the largest battery-manufacturing concern in India, with an up-to-date plant including machinery for manufacturing containers. Standard Batteries Ltd., Bombay, has also recently installed a modern plant for producing complete batteries including containers. Amco and a few other units are also reported to have definite plans for expanding and modernizing their plants.

wood are also being carried out at the Dehra Dun Forest Research Institute. An extract from Utilisation (New Series), Indian Forest Bulletin No. 134 —1944, ' Indian Woods for Battery Separators,' is given in Appendix III. We recommend that more extensive experiments with suitable varieties of wood should be undertaken at the Dehra Dun Forest Research Institute in collaboration with the principal battery manufacturers in the country.

(d) Of the remaining raw materials, pig lead is imported from Burma or Australia, and sulphuric acid is available in India, while antimony is partly imported from China, and partly produced in the country. Lead oxides are also manufactured in the country from imported lead. A few chemicals, such as, vandyke crystals and barium hydrate, which are used in small quantities by certain firms, are also imported.

Process of manufacture.

6. (a) A battery for motor vehicles consists of a group of positive and negative plates enclosed in a container. Plates are formed from grids cast out of antimonial lead and pasted over with oxides of lead mixed with sulphuric acid and certain other chemicals. They are formed positive or negative through a chemical change effected by passing an electric current of required intensity through the plates while they are held in a sulphuric acid bath. After this process, the plates are washed and dried. They are then assembled into negative and positive groups.

(b) A group of negative plates is then interlocked with a group of positive plates, the plates themselves being kept separate from one another by thin sheets of special wood or ebonite. These sheets are known as separators and they serve as insulators between the two kinds of plates. The interlocked groups are then placed in the container.

(c) Containers are made of vulcanized rubber, asbestos composition or plastics and have vented covers of the same material. Both containers and covers are usually made in hydraulic pressing machines.

(d) Connectors are then fitted to the assembled plates already placed in the container. The container cover is then put on and the unit is sealed with a sealing compound. Vents have stoppers made of the same material or of porcelain.

The battery is then ready for despatch.

Imports.

7. The Annual Statement of the Sea-Borne Trade records the total value of all the accumulators (including parts of all types) imported into the country. The item ' accumulators ' includes, besides motor vehicle batteries, batteries for train lighting, radio sets, and tractors. Since motor vehicle batteries are classified together with the other types of accumulators in one single group, it is not possible to ascertain from the trade statistics the value of these batteries imported into the country. Mr. L. Hansen, representative of Chloride Electrical Storage Co. Ltd., Calcutta, however, furnished us with the following figures of imports in the prewar period :—

Number of motor vehicle batteries imported.

1937	57,317
1938	50,797
1939	53,771

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During those years the principal sources of imports were the U.S.A. and the U.K., as indicated by the following figures :—

Imports from the U.S.A.

1937	37,000
1938	25,000
1939	22,500

Imports of 'Exide' batteries from the U.K.

1937	11,100
1938	14,400
1939	17,000

Mr. Hansen further stated that batteries were also imported during the prewar period, from Japan, Czechoslovakia, Canada and Germany. During the period January—June 1947, import licences were issued in respect of about 37,000 batteries, roughly two-thirds from the U.K. and the rest from the U.S.A., Australia and New Zealand. As a result of the representation made by the battery manufacturers in the country, the import quota for the period July—December 1947, was restricted to 10 per cent of the prewar imports. We have, however, no information as to whether the full quota for which licences were issued, has actually been imported. According to a Public Notice dated the 12th December 1947 issued by the Government of India in the Ministry of Commerce, the issue of import licences for motor vehicle batteries is at present subject to an overall monetary ceiling. It is desirable that accurate statistics of imports of motor vehicle batteries should be available in future and we recommend that the value and quantity of such batteries should be separately recorded in the Sea-Borne Trade Account.

Indigenous demand.

8. It is not possible to give any precise estimate of the demand for motor vehicle batteries in the country. The former Department of Industry and Supply, in its memorandum dated 4th June 1947 estimated the demand to be about 200,000 batteries per annum. General Motors, in its reply to the Board's questionnaire, estimates the total demand to be about 180,000 batteries for replacement purposes and 30,000 batteries for original equipment in new vehicles. About 25 or 30 per cent may, however, be taken to have been used in the areas which now constitute Pakistan. But, since these estimates were made, there has been a considerable increase in the number of cars and other motor vehicles on the road leading to an increase in the demand for batteries. The matter was discussed with the representatives of the industry at the public inquiry, and it was agreed that the present demand in the country might roughly be put at 200,000 batteries per annum for replacement purposes. To this must be added another 40,000 batteries which are fitted as original equipment to new motor vehicles, whether imported or assembled in India. Another 5,000 batteries, 6 volt 15 plate, would also be required for use in radio sets. The total demand for motor vehicle batteries in the next two or three years may, therefore, be estimated to be about 250,000 batteries a year.

Indigenous production.

9. (a) Twenty-four known producers of motor vehicle batteries were requested by the Board to state their rated capacity and actual production. Of these, only ten sent their replies. It may be presumed that the remaining fourteen pro-

their batteries was for 3 months, instead of 12 months as before the war, there had been actually no decrease in the life of their batteries and that if any defect developed in a battery within a year, it was replaced. While the representatives of consumers contended that this reduction of the guarantee period for the imported batteries was due to an actual lowering of the quality, the importers explained that the reduction of the guarantee from one year to 3 months was intended only to avoid unnecessary trade risks.

Batteries made in India by subsidiaries of foreign Companies : A possible case of unfair competition

11. As already stated in paragraph 4(i), Chloride Electrical Storage Company (India) Ltd., which is the biggest unit of the industry in this country, is a subsidiary of a long established Company of the same name in the U.K., which has similar subsidiaries in Australia and New Zealand as well. Its motor vehicle batteries, whether produced in the U.K. or Australia or New Zealand or India, bear the well-known trade-brand " Exide '. It was complained that the 'Exide ' batteries made in India are not labelled ' Made in India ', whereby the consumers may be led to think that they were made in the U.K. The representatives of the Company replied that the ' Exide ' made in India was exactly of the same quality as the ' Exide ' made in Australia or in the U.K. or in New Zealand, but admitted the reasonableness of the demand that their batteries made in India should be labelled ' Made in India ', and agreed to comply with the demand. We were also informed that General Motors (India) Ltd., proposes to manufacture batteries in India from March 1948 and that it would brand its batteries as GMI and not as Delco which is the trade brand for its batteries made in the U.S.A. We recommend that all battery manufacturers in this country should be required to label their batteries as ' Made in India '.

Standard specifications.

12. At the present time there are no standard specifications for motor vehicle batteries. While the British standard specifications are insisted upon by Government for the batteries used for train lighting and stationary purposes, no specifications are enforced for motor vehicle batteries. In the interest of sound development of the industry, we consider it necessary that Indian standard specifications for indigenous motor vehicle batteries should be evolved at an early date. The battery manufacturers also recognized the need for such specifications. We recommend that the industry should take immediate steps to evolve and adopt, in consultation with the Indian Standards Institution, suitable standard specifications for motor vehicle batteries including containers.

Comments on cost of production.

13. (A) At the present time, the biggest producer of motor vehicle batteries in India is Chloride Electrical Storage, Calcutta. But, at the time of cost investigation, the Company had been in production of batteries spasmodically for just over a year and did not maintain regular cost data. Moreover, it was not interested in protection. The Board, therefore, decided to cost two Indian-owned and Indian-managed factories and selected Standard Batteries, Bombay, and Amco Batteries, Bangalore, for the purpose of costing. It was found that the Standard Batteries factory

During those years the principal sources of imports were the U.S.A. and the U.K., as indicated by the following figures :—

Imports from the U.S.A.

1937	37,000
1938	25,000
1939	22,500

Imports of 'Exide' batteries from the U.K.

1937	11,100
1938	14,400
1939	17,000

Mr. Hansen further stated that batteries were also imported during the prewar period, from Japan, Czechoslovakia, Canada and Germany. During the period January—June 1947, import licences were issued in respect of about 37,000 batteries, roughly two-thirds from the U.K. and the rest from the U.S.A., Australia and New Zealand. As a result of the representation made by the battery manufacturers in the country, the import quota for the period July—December 1947, was restricted to 10 per cent of the prewar imports. We have, however, no information as to whether the full quota for which licences were issued, has actually been imported. According to a Public Notice dated the 12th December 1947 issued by the Government of India in the Ministry of Commerce, the issue of import licences for motor vehicle batteries is at present subject to an overall monetary ceiling. It is desirable that accurate statistics of imports of motor vehicle batteries should be available in future and we recommend that the value and quantity of such batteries should be separately recorded in the Sea-Borne Trade Account.

Indigenous demand.

8. It is not possible to give any precise estimate of the demand for motor vehicle batteries in the country. The former Department of Industry and Supply, in its memorandum dated 4th June 1947 estimated the demand to be about 200,000 batteries per annum. General Motors, in its reply to the Board's questionnaire, estimates the total demand to be about 180,000 batteries for replacement purposes and 30,000 batteries for original equipment in new vehicles. About 25 or 30 per cent may, however, be taken to have been used in the areas which now constitute Pakistan. But, since these estimates were made, there has been a considerable increase in the number of cars and other motor vehicles on the road leading to an increase in the demand for batteries. The matter was discussed with the representatives of the industry at the public inquiry, and it was agreed that the present demand in the country might roughly be put at 200,000 batteries per annum for replacement purposes. To this must be added another 40,000 batteries which are fitted as original equipment to new motor vehicles, whether imported or assembled in India. Another 5,000 batteries, 6 volt 15 plate, would also be required for use in radio sets. The total demand for motor vehicle batteries in the next two or three years may, therefore, be estimated to be about 250,000 batteries a year.

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was the larger, more developed and more efficient of the two factories. The cost data obtained from this factory were adopted by us as the basis for estimating the fair selling price of indigenous motor vehicle batteries. The factory produces several types ranging from 6 volt 9 plate to 12 volt 21 plate batteries. About 75 per cent of the total output, however, was represented by 6 volt 15 plate and 6 volt 17 plate batteries. These two were, therefore, selected as the most representative types of batteries for the purpose of costing. As the representatives of Standard Batteries Ltd., desired that its cost data should be kept confidential, we are submitting the cost data to Government as a separate enclosure to the report.

(B) In costing Standard Batteries we came up against a serious difficulty in that, during the last two years and a half, the firm's method of production has passed through important changes as indicated below :—

(i) From 1st June 1945 to 31st December 1946 the entire process was carried out by manual labour and the drying was done in the open atmosphere.

(ii) From 1st January 1947 to 30th June 1947, the casting of the grids and their dressing and punching was done on semi-automatic machines. The pastes were also mixed by machines.

(iii) From 1st July 1947 onwards, an entirely new automatic machine has been installed for casting and dressing the grids, while mixing the paste and pasting the grids is also carried out by machines ; the drying is done in electrically heated chambers with temperature controls ; forming takes place on big tank formations ; and the assembling is done more efficiently than before with jigs and tools. Moreover, this Company has recently installed seven automatic presses for the manufacture of containers from a special rubber compound. The container plant, which is stated to have a theoretical capacity of producing 100,000 containers per annum, will be able to meet the Company's requirements of containers from 1948 onwards.

(C) Our Cost Accounts Officer examined the actual cost of production in two different periods, *viz.*, (i) 1st June 1945 to 30th June 1946 and (ii) 1st July 1946 to 30th June 1947. While audited accounts were available for the first period, the accounts of the second period had not been audited at the time when the investigation was carried out. Further, the larger and more efficient battery-manufacturing plant and the automatic container plant having started production from July 1947 only, actual cost data for the latest method of production with automatic machines were not available when the cost was examined in July and August 1947. Consequently, while the estimates of cost of production for the first two periods were based upon actual cost data, the estimate of cost of production for the latest period was prepared partly on the basis of past data and partly in the light of discussion between the management and our Cost Accounts Officer and Technical Adviser. As regards the quantities of materials allowed in the estimate of future costs, our Cost Accounts Officer was mainly guided by the records of past production. As for the prices of the raw materials, the latest market quotations have been adopted.

Moreover, the Company used to buy in the past all its requirements of containers from outside. The production of containers on automatic presses was started only in July 1947, so that at the time of costing no actual cost data for the manufacture of containers were available. In spite of these limitations, the Cost Accounts Officer, with the help of our Technical Adviser and in consultation with the Company's representatives, estimated as closely as possible the cost of production of batteries and containers in the new plant. It may be noted that 75 per cent of the total cost of batteries consists of the cost of the raw materials. The Company maintained that there was no scope for further economy in the quantity of the raw materials used. We have, therefore, taken the quantities of the raw materials from the latest actual figures and we have taken their prices from the latest market quotations. As regards the other items in the cost of production, adjustments are made as follows :—

(i) The item ' monogram ' under raw materials, costing Re. 0.23 per battery, has been disallowed, as this is no longer used.

(ii) *Power and fuel* : The Company claimed that with the use of automatic machinery, the consumption of power and fuel per unit of production would be larger than for the previous periods. As it was not possible for the firm to say definitely what this increase would be, it accepted the suggestion that the power and fuel cost per unit of output in future might be kept at the same level as in the half year January—June 1947.

(iii) *Indirect labour, repair and maintenance, consumable stores, establishment and other overheads excepting those mentioned in* (iv) *below*.—The production of batteries is expected to go up from 9,000 batteries during the six months ended the 30th June 1947 to 45,000 batteries in 1948 and 60,000 batteries in 1949. To cover this great expansion of output, the amount of total expenditure allowed on these items in the future costs is only 25 per cent above the level of expenditure in the half year ended the 30th June 1947. We think that this is reasonable and have allowed this increase.

(iv) *Other overheads* : (a) *Insurance* : An amount of Rs. 7,000 per annum for insurance has been allowed on the basis of the latest quotation of an insurance company with which the Company has arranged to insure.

(b) *Library and research* : The Company is starting a separate library and research department. The annual expenditure under this head is estimated to be 10,000 which has been allowed.

(c) *Advertisement* : The number of completed batteries produced during the 13 months ended the 30th June 1946 was 10,000 and the number produced during the 6 months ended the 30th June 1947, was 9,000. There was not much need for advertisement in the past to find market for this small production But the Company's production will go up to 45,000 in 1948 and 60,000 in 1949. For this much bigger production, advertisement on an extensive scale will have to be

undertaken. The Company's claim under this item was at first Rs. 1,00,000 but was subsequently reduced to Rs. 70,000. The Board has gone into this question carefully and agrees that, during the first 4 or 5 years, the need for advertisement would be great. But as all the major factories in the country will take about 2 years to start producing batteries to their full rated capacity, the Board feels that an allowance at the rate of Re. 1-0-0 per battery for advertisement should be sufficient during the next 2 or 3 years. This will mean that, on a production of 45,000 batteries in 1948 the Company will be able to spend Rs. 45,000 and on a production of 60,000 batteries in 1949 the expenditure allowed for this item will go up to Rs. 60,000.

(d) *Depreciation* : This has been allowed in the future cost schedules on the basis of written-down values at income-tax rates.

(e) *Packing charges* : The actual expenditure during the six months ended the 30th June 1947 in respect of materials and labour for packing was Rs. 2.23 in the case of 6 volt 15 plate battery and Rs. 2.28 in the case of 6 volt 17 plate battery. The same amounts are adopted for future costs also, as the Company does not anticipate any fluctuations.

(f) *Interest on working capital* : From the balance sheet for the 13 months ended the 30th June 1946, it is found that the capital employed rotates only 0.5 time in a year. On this basis, the working capital has been taken at 6 months' cost of production, and interest thereon at 4 per cent (which works out to 1/50th of the total cost) has been allowed. In this case, the working capital required for producing 45,000 batteries in 1948 will be about Rs. 10,00,000. If production is stepped up in 1949 to 60,000 batteries per annum, the Company may require a larger amount of working capital. But the rotation of capital may change by that time. Therefore, the same amount of working capital, *viz.*, Rs. 10,00,000 has been allowed for 1948 and 1949. It may be mentioned that the interest allowed on working capital comes to 2 per cent on cost when total production is 45,000 batteries and 1.4 per cent on cost when production goes up to 60,000 batteries.

(g) *Profit on block capital* : The original value of the block is Rs. 3.43 lakhs. Out of this, an amount of Rs. 6.28 lakhs is the value of the block relating to the container department. Therefore, the value of the block relating to the batteries section is Rs. 3.15 lakhs. 10 per cent on the block relating to the batteries section works out to Rs. 31,500, and this amount has been distributed over the total production. It will be noticed that the profit so allowed works out to 1.5 per cent on cost of production if 45,000 batteries are made, and to 1.1 per cent on cost of production if 60,000 batteries are made.

(h) *Containers* : By far the biggest single item of improvement introduced from July 1947 is in the manufacture of containers. To avoid complications in estimating the future cost of batteries, the production of containers has been treated as a separate unit. The Company has given an estimate of Rs. 8|- per container for the purpose of inter-departmental adjustment. This includes profit at 10 per cent on the block relating to the container section. While it provides for only specific additional expenditure necessary for the container section, it does not include other overhead expenditure, which is entirely absorbed by the batteries section. It would, therefore, follow that the price of Rs. 8|- for the container is only meant for inter-departmental adjustment within the factory and is not to be taken as the price at which the Company can sell it to outsiders. It may be mentioned that the price paid by the Company in recent months for buying containers from outside was about Rs. 11|-.

(i) *Freight equalization* : Standard Batteries, Ltd., claimed that, in fixing the fair selling price of indigenous batteries, an allowance should be made for freight equalization on the ground that, for selling its products in markets near and around ports other than Bombay, it has to incur expenses for freight, which the imports at those ports do not bear. We examined this question. Since the industry is not localised in Bombay, but is dispersed in several parts of the country, and since we received no definite data to show the proportion of sales to the output of batteries for different producers in different markets, it was not possible to estimate what amount, if any, should be allowed by way of freight equalization. Consequently, no allowance has been made for this item.

Board's estimate of fair selling prices.

14. Our estimate of the fair selling prices of indigenous batteries is as follows :—

	1948	1949
	Rs.	Rs.
6 Volt 15 Plate	45·77	44·53
6 Volt 17 Plate	50·54	49·14

We shall compare these prices with the c.i.f. prices and landed costs of the corresponding imported batteries for the purpose of determining the measure of protection.

Comparison with the estimate given by Chloride Electrical Storage Company.

15. Chloride Electrical Storage Co., Calcutta, gave us an estimate of the cost of production of 6 volt 17 plate (3 XCZ 17 type) battery at the Chloride Factory which comes to Rs. 50.04. As the Company requested us to treat as confidential, the details of cost, we are not giving all such details here. The Company's figure of overall cost, i.e. Rs. 50.04 is approximately equal to our estimate of the fair selling price of 6 volt 17 plate Standard batteries

in 1948. Our estimate, however, includes an allowance of profit at the rate of Re. 0.79 per battery. If we subtract this from our estimate, then the comparative figures would be Rs. 49.75 for Standard batteries and Rs. 50.04 for Chloride batteries. Though we had no opportunity to examine the cost data for Chloride batteries on the spot by reference to their account books, we discussed the figures with a representative of the firm and feel that the estimate given by the firm may be accepted as reasonably correct. These comparative cost figures indicate that our estimate of fair selling prices of indigenous batteries is, on the whole, fair.

Economy in the use of raw materials and reduction in labour costs.

16. (a) In comparing the costs of the Chloride with the Standard batteries, we found that, though the total cost of production in both cases was approximately the same, the cost of raw materials for the Chloride batteries was lower than that of Standards. It is true that the higher expenditure on the raw materials for Standard batteries is compensated by nearly an equal amount of saving on the overheads. Nevertheless, we see no reason why Standards should not be able to effect economy in the use of lead, as is being done by Chlorides with success in the production of batteries of high quality. There is a world shortage of lead, its price is high and it is difficult to procure from abroad. And, there being no indigenous source of supply of lead of the proper quality, we have to meet our requirements from imports. It is, therefore, necessary that the utmost economy should be practised in the use of this basic and scarce raw material. Lead and lead oxides constitute roughly two-thirds of the cost of the raw materials and one-half of the total cost of production of batteries. Economy in the use of lead would, therefore, be a major item of improvement in the manufacture of batteries. We recommend that the Indian manufacturers of motor vehicle batteries should take immediate steps to introduce maximum economy in the use of lead.

(b) Chloride Storage has also furnished us with some interesting figures of comparative labour costs in their Manchester and Calcutta factories. While 22 workers in the assembly section of the Manchester factory turn out 2,000 batteries a day, 30 workers in the corresponding section of the Calcutta factory produce only 300 batteries a day. On this basis, the output per worker in the assembly section at Manchester is about 90 batteries a day, as compared with 10 batteries a day in Calcutta. It is, of course, true that the average remuneration of the worker in Manchester is much higher than that in India. Thus, while the total remuneration received in Manchester by a male worker is Rs. 18-1-4 per day and by a female worker Rs. 11-2-5 per day, the corresponding remuneration for the factory worker in Calcutta is Rs. 3-4-4 per day. The respective numbers of male and female workers in the Manchester factory were not given. Assuming that there are equal numbers of male and female workers in Manchester, the total labour cost for assembling 2,000 batteries there comes to about Rs. 322-0-0. The corresponding labour cost for 2,000 batteries in Calcutta comes to about Rs. 654-0-0. It would thus be seen that, in spite of the wage rate in the Manchester factory being more than four times as high as that in the Calcutta factory, the labour cost for assembling batteries in Manchester is less than half of that in Calcutta. This striking difference in the labour cost of assembling batteries in the two factories is due

to the output per worker in Manchester being 9 times that in Calcutta. We do not see any reason why the average output per worker in the indigenous battery manufacturing industry should not increase appreciably above the present figure, particularly in view of the fact that most of the machinery used in this industry is automatic or semi-automatic and the work done by the ordinary operative is semi-skilled. We recommend that the battery manufacturing industry should make every effort to train up the workers so as to attain a higher output per worker and thus reduce the labour cost per battery.

Existing rates of import duties.

17. Batteries for motor vehicles are included under item No. 75(1) of the First Schedule to the Indian Tariff Act XXXII of 1934 (as in operation on the 1st January 1948). The relevant extract from the Indian Customs Tariff (28th issue) is given below :—

Item No.	Name of the article	Nature of duty	Standard rate of duty	Preferential rate if the article is the produce or manufacture of		
				U. K.	A British Colony.	Burma
75(1)	Motor car including taxi cabs and articles (other than rubber tyres and tubes) adapted for use as parts and accessories thereof, provided that such articles as are ordinarily also used for other purposes than parts and accessories of motor vehicles included in this item or in items Nos. 75 (2) and 75 (3) shall be dutiable at the rate of duty specified for such articles.	*Preferential revenue*	45% *ad valorem*	36% *ad valorem*	..	24% *ad valorem*

C.i.f. prices and landed costs of imports.

18. A statement of recent c.i.f. prices of motor vehicle batteries is given in Appendix IV. The most popular and representative types of standard batteries used in the country are 6 volt 15 plate and 6 volt 17 plate batteries. The latest and the lowest c.i.f. prices and landed costs of imports of these batteries, together with the dates and sources of their importation, are given in the following table :—

Latest c.i.f. prices of imported batteries.

	6 *volt* 15 *plate.*				6 *volt* 17 *plate.*			
	Ford Motors		Battery Service Ltd.		Mousell & Co.		Battery Service Ltd.	
	Origin of import: U.K.	Date of import: Sept. '47.	Origin of import: U.S.A.	Date of import: July '47.	Origin of import: U.K.	Date of import: latest.	Origin of import: U.S.A.	Date of import: June '47.
	Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.	
(a) C.i.f. price	23 13 6		27 0 10		33 5 4		30 1-10	
(b) Customs duty	8 9 4	(36%)	12 2 9	(45%)	12 0 0	(36%)	13 8 10	(45%)
(c) Clearing charges	0 5		1 8 5		2 4 8		1 6 4	
(d) Landed cost	32 12 0		40 12 0		47 10 0		45 1 0	

19. In paragraph 14 we have given our estimate of fair selling prices of indigenous batteries in 1948 and 1949. It would be seen from the figures given there that there would be very slight reduction of prices in 1949, as compared with those of 1948. But as the protective measure is expected to come into force in 1948 and as there is only a slight difference between the 1948 and 1949 figures of estimated prices, we think it desirable that the fair selling prices in 1948, instead of those in 1949, should be compared with the prices of imports for the purpose of determining the measure of protection. Such a comparison is given in the following table :—

Comparison of landed costs and fair selling price.

Comparative statement of landed cost and fair selling price.

	6 *volt* 15 *plate.*				6 *volt* 17 *plate.*			
	Ford Motors		Battery Service Ltd.		Mousell & Co.		Battery Service Ltd.	
	Origin of import : U.K.	Date of import : Sept. 47	Origin of import : U.S.A.	Date of import : July 47	Origin of import : U.K.	Date of import : latest	Origin of import : U.S.A.	Date of import : June 47
	Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.	
(a) C.i.f. price	23 13 6		27 0 10		33 5 4		30 1 10	
(b) Customs duty	8 9 4		12 2 9		12 0 0		13 8 10	
(c) Clearing charges	0 5 2		1 8 5		2 4 8		1 6 4	
(d) Landed cost	32 12 0	(36%)	40 12 0	(45%)	47 10 0	(36%)	45 1 0	(45%)
(e) Landed cost without duty	24 2 8		28 9 3		35 10 0		31 8 2	
(f) Fair selling price of indigenous batteries	45 12 4		45 12 4		50 8 8		50 8 8	
(g) Difference between fair selling price and landed cost without duty.	21 9 8		17 3 1		14 14 8		19 0 6	
(h) Difference between fair selling price and landed cost without duty as percentage of c.i.f.	90·6		63·2		41·8		63·2	

Measure of protection.

20. (a) The comparative figures given in the preceding paragraph would indicate a duty of about 90 per cent *ad valorem* on imports of 6 volt 15 plate batteries from the U.K., about 42 per cent *ad valorem* on imports of 6 volt 17 plate batteries from the U.K., about 63 per cent *ad valorem* on imports of 6 volt 15 plate and 6 volt 17 plate batteries from the U.S.A. While in the case of both types of imports from the U.S.A., the same duty, viz., 63 per cent, is indicated, the duties indicated in the case of imports from the U.K. are as far apart as 42 per cent and 90 per cent. Since, at the present time, the main competition comes from the British batteries, we may, first, determine the appropriate rate of duty on British imports. If we take the higher figure of 90 per cent, it becomes too high for 6 volt 17 plate batteries ; and if we take the lower figure of 42 per cent, it becomes inadequate for 6 volt 15 plate batteries. This discrepancy is reduced, if we take the average of the two figures, viz., 66 per cent. But there are two factors for which an allowance should be made. Firstly, the importers informed us during the public inquiry that the recent trend of import prices is definitely upwards on account of a rise in the price of raw materials like lead and in the cost of packing. Secondly, there is every possibility that the indigenous manufacturers will be able to effect some economy in the cost of production, particularly in the consumption of lead, in the near future. If we allow 6 per cent for these two factors, the rate of duty would come to 60 per cent. To this, however, we have to add 20 per cent for prejudice against the indigenous batteries. The rate of import duty on imports of batteries from the U.K. would thus come to 80 per cent. We recommend that a protective duty of 80 per cent *ad valorem* should be imposed on the imports of motor vehicle batteries from the U.K. And, as the industry is not likely to be stabilized in less than three years, we recommend that the protective duty should remain in force for a period of three years.

(b) It appears to us that, under the Indo-British Trade Agreement of 1939 and the Indo-Burma Trade Agreement of 1941, (relevant extracts from the texts of the two Agreements given in Appendices V (a) and (b) there should be a preferential margin in favour of imports from the U.K., as compared with the standard rate, and a preferential margin in favour of imports from Burma as compared with both the standard rate and the U.K. preferential rate. The present margins are 9 per cent in favour of imports from the U.K., as compared with the standard rate, and 12 per cent and 21 per cent in favour of imports from Burma, as compared with the British preferential rate and the standard rate respectively. If the present preferential margins in favour of imports from the U.K. and Burma have to be maintained, the rates of import duty should be : standard rate 89 (or, say, 90) per cent, British preferential rate 80 per cent, and Burma preferential rate 68 per cent respectively. It may also be mentioned that, if the modifications proposed in the General Agreement on Tariffs and Trade, Schedule XII-India, are approved and finally adopted, the standard rate should not exceed 86 per cent. (Relevant extract from the text of the Agreement is given in Appendix VI).

(c) We also recommend that the same rates of protective duty should be levied on imports of battery plates, as otherwise plates might be im-

ported at lower rates of duty and then assembled into batteries here, thereby defeating the object of protection.

(d) Judging from the available evidence regarding the trends of prices of lead and other elements of costs in foreign countries, we do not think that the prices of the imports will appreciably fall in the next 3 years. But, should unforeseen circumstances cause a serious fall in the prices of the imports, so as to jeopardise the present measure of protection, the indigenous battery manufacturers may apply to Government to review the case, and, if necessary, to adjust the duty under section 4(1) of the Indian Tariff Act, XXXII of 1934.

Imroposed changes in the Import Tariff Schedule.

21. If our recommendations regarding the levy of protective duties at higher rates are accepted, the Import Tariff Schedule will have to be modified. The present items 75(4), 75(5), 75(6), 75(7), 75(8), should be shifted forward and re-numbered as 75(5), 75(6), 75(7), 75(8) and 75(9) and item 75(1) and item 75(4) (new) should be redrafted as follows :—

Item No.	Name of article.	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of			Duration of protective rate of duty.
				The United Kingdom	A British Colony.	Burma	
75(1)	Motor cars including taxi cabs and articles (other than rubber tyres and tubes and *batteries*) adapted for use as parts and accessories thereof, provided that such articles as are ordinarily also used for other purposes than as parts and accessories of motor vehicles included in this Item or in Items Nos. 75 (2), 75(3) and 75 (4) shall be dutiable at the rate of duty specified for such articles	Preferential Revenue ..	45% *ad val.*	36% *ad val.*	..	24% *ad val.*	
75 (4) (New)	Batteries for motor vehicles (including those batteries which are interchangeable for automobile purposes on the one hand and Radio, Telephone and Telegraph on the other) and plates for these batteries.	Protective.	90%	80%	..	68%	Three years.

Other assistance

22. Apart from protection by means of import duties, the indigenous manufacturers asked for certain other assistance. We may now examine this question.

(i) *Reduction in the control price of lead and other materials.*— Since distribution control over lead and antimony, the two important

non-ferrous metals required by the battery manufacturers, has recently been lifted, the question of a reduction in the control price of these materials does not arise. The battery manufacturers have now to make their own arrangements for procuring lead and antimony through the normal trade channels or they have to import their requirements themselves, if those are in large quantities. It should, however, be mentioned that grant of import licence for lead and antimony is restricted by monetary limits.

(ii) *Remission of duty on the raw materials and battery component parts.*—The measure of protection we have recommended is based upon our estimate of the fair selling price of indigenous batteries, and in that estimate we have taken the raw materials at their present market prices and thus allowed for the incidence of the present duty. Consequently, remission of duty on the raw materials and battery component parts, though it might be desirable on other grounds, is not called for as a means of adequate protection to the Industry. It may, however, be mentioned that, if the General Agreement on Tariffs and Trade (Geneva, 1947) is ratified, there would be a reduction of the import duty on Douglas fir wood (used for separators) from 30 per cent. to 20 per cent, *ad valorem.*

(iii) *Remission of duty on machinery.*—The Standard Batteries, Ltd., in a letter dated the 12th December 1947, asked that it should be given a refund of Rs. 71,869|2, being the amount which it has already paid as import duty on machinery imported after the date of its original application for protection, i.e., the 27th April, 1946. Since, in determining the measure of protection, we have made full allowance for the actual cost of the machinery, a refund of duty on machinery is not called for as a means of adequate protection. Moreover, as the installed capacity in the country is already sufficient to meet the country's requirements for the next three years, at any rate, there is no special need, in this case, for refunding the duty on machinery for stimulating the expansion of the industry.

(iv) *Ban on the import of batteries fitted as original equipment of motor vehicles.*—The measure of protection we have recommended would, in our opinion, be quite adequate to protect the indigenous industry against all competitive imports ; we do not consider that any ban on imports of batteries fitted as original equipment of motor vehicles is necessary, and we do not recommend such a ban.

Import Control.

23. The measure of protection we have recommended would, in our opinion, be adequate to protect the indigenous battery industry against all competitive imports. Consequently, the continuance of the present import control on motor vehicle batteries, though it may be necessary for conserving foreign exchange resources, will not be required as a means of protecting the industry.

Burden of protection.

24. An idea of the probable incidence of the increase in the prices of motor vehicle batteries on the users of such batteries, on account of the increase in the rate of duty recommended by us, will be obtained from the following comparative figures relating to two representative types viz., 6 volt 15 plate and 6 volt 17 plate batteries :—

Maximum retail selling prices of batteries with existing duties.

	6 Volt 15 plate				6 volt 17 plate			
	(i) U.K.		(ii) U.S.A.		(i) U.K.		(ii) U.S.A.	
	Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.	
(a) c.i.f.	23 13 6		27 0 10		33 5 4		30 1 10	
(b) Customs duty	8 9 4	(36%)	12 2 9	(45%)	12 0 0	(36%)	13 8 10	(45%)
(c) Clearing charges	0 5 2		1 8 5		2 4 8		1 6 4	
(d) Landed cost	32 12 0		40 12 0		47 10 0		45 1 0	
(e) Maximum retail selling prices	65 8 0		81 8 0		95 4 0		90 2 0	
Maximum retail selling prices of batteries with proposed duties.								
(a) c.i.f.	23 13 6		27 0 10		33 5 4		30 1 10	
(b) Customs duty	19 1 4	(80%)	24 5 6	(90%)	26 10 8	(80%)	27 1 8	(90%)
(c) Clearing charges	0 5 2		1 8 5		2 4 8		1 6 4	
(d) Landed cost	43 4 0		52 14 9		62 4 8		58 9 10	
(e) Maximum retail selling prices	86 8 0		105 13 6		124 9 4		117 3 8	
Increase in price	21 0 0		24 5 6		29 1 4		27 1 8	
Percentage increase in price	32%		30%		30%		30%	

We were informed that the life of a motor car battery is 18 months and of a motor truck battery 9 months. On this basis the increase in the running cost of a motor car would be about Re. 1 or Rs. 1|8|- per month and the corresponding increase for the motor truck would be about Rs. 2 or Rs. 3 per month. Considering the present prices of motor cars and motor trucks and the present levels of their running costs, we do not think that this small increase in those costs would impose any excessive burden on the users of motor cars and motor trucks.

Eligibility for protection.

25. We are satisfied that the motor vehicle battery industry in the country is now established and conducted on sound business lines. And we believe that, given the necessary protection and assistance as recommended by us, the industry is likely within a reasonable period of time to develop sufficiently to be able to carry on successfully without protection or State assistance. Besides, batteries being an essential accessory of motor vehicles, we consider that the development of this industry will be in the interest of the nation. The industry is thus eligible for protection.

Foreign capital and enterprise in the industry : The urgency of formulating a national policy.

26. The protection of an industry, whether through import duties or by means of a subsidy, imposes a definite burden on the community which is justified on the ground that the development of the industry stimulates national enterprise, creates new opportunities for the technical training of nationals, and provides profitable employment for national capital and labour. But the community cannot derive these benefits in full measure if the capital, control, and management of important units of a protected industry, are held entirely or largely by non-nationals. In such a case, the protected industry does not become a national industry in the fullest sense of the term. In the battery industry, there are so far two big units of the industry, namely, Chloride Electrical Storage Company (India), Ltd., and General Motors (India), Ltd. (Battery Section), which are entirely foreign-owned and foreign-managed. Chloride Storeage has 20 Indians on its lower supervisory staff, but the higher staff is foreign. General Motors proposes to place the technical management of the Battery Section in charge of an Indian. Both firms necessarily employ only Indian workers for the semi-skilled and unskilled jobs. We were also informed that Chloride Storage had under active consideration a proposal to register a company in India with provision for the participation of Indians in capital and management. Both companies also propose to train up Indians for technical jobs. General Motors, however, informed us that it had no proposal to provide for the participation of Indians in its capital and management. During the course of the inquiry, it was disclosed that the present capacity of Chlorides can be expanded from 84,000 to 1,50,000 batteries if it works more shifts. General Motors which is coming into production will have a capacity of 60,000 per shift which can also be raised to 1,20,000 batteries if it works more shifts. These two companies between them can, therefore, manufacture 2,70,000 batteries per year which will exceed the country's demand estimated at 250,000 batteries. In the event of such expansion of their production, the Indian section of the industry will be very adversely affected and the objective of the protective measure will be largely

defeated. The representatives of the indigenous battery manufacturers forcefully pleaded before us that their interests would be seriously prejudiced through the unrestricted operation of foreign capital and enterprise in this industry. Although, for the present, the Indian section of the industry is assured of a market, the risk to which it will be exposed in the event of expansion of production by the foreign companies, is one that cannot be overlooked. In case the two foreign companies expand their production to the serious detriment of the Indian manufacturers, we recommend that Government should adopt necessary measures to safeguard the Indian section of the industry. The lines on which Government should take action can, of course, be determined in consonance with the broad policy adopted by them, regarding the employment of foreign capital and enterprise in this country. We also recommend that Government should enunciate their policy on this vital matter at an early date, as otherwise, the policy of protection to national industries will be undermined.

Summary of conclusions and recommendations.

27. Our conclusions and recommendations are summarised as under :—

(i) Although there were a few factories producing motor vehicle batteries on a small scale in the prewar period, the industry expanded considerably during and after the war. Government assisted in the wartime growth of this industry by granting import licences for battery making plant and by securing a steady flow of raw materials required for the manufacture of batteries. Paragraph 4(a).

(ii) With the exception of lead and suitable wood for separators and certain chemicals, all the other important raw materials are available in the country. Paragraph 5.

(iii) Asbestos is reported to be available in Mysore and Saraikella. We recommend that the Council of Scientific and Industrial Research should be asked to take steps to have this material processed for the manufacture of containers. Paragraph 5(b).

(iv) We recommend that extensive experiments with varieties of wood suitable for separators should be undertaken at the Dehra Dun Forest Research Institute, in collaboration with the principal battery manufacturers in the country. Paragraph 5(c).

(v) The Annual statement of Sea-borne Trade does not, at present, separately record the value of the motor vehicle batteries imported into India. According to the information furnished by an importing firm, the number of motor vehicle batteries imported into the country in 1937, 1938 and 1939 were 57,317, 50,797, and 53,771 respectively. Import licenses for this article are at present issued subject to an overall monetary ceiling. Paragraph 7.

(vi) We recommend that the quantity and value of imported motor vehicle batteries should be separately recorded in the Annual statement of Sea-borne Trade. Paragraph 7.

(vii) The present demand for motor vehicle batteries in the country is estimated to be 250,000 batteries a year. Paragraph 8.

(viii) The estimated rated capacity of the indigenous battery manufacturing industry is 268,300 batteries for 1948 and 352,300 batteries for 1949. But production to capacity can be attained only on the basis of a steady and adequate supply of raw materials. We recommend that Government should give all facilities for the procurement of raw materials, imported as well as indigenous, by the manufacturers of motor vehicle batteries. Paragraph 9.

(ix) Given a steady supply of raw materials of the right quality, the Indian manufacturers can turn out batteries as good as the imported article. Paragraph 10(a).

(x) We recommend that all battery manufacturers in this country should be required to label their batteries as *MADE IN INDIA*. Paragraph 11.

(xi) We recommend that the battery manufacturing industry should take immediate steps to evolve and adopt, in consultation with the Indian Standards Institution, suitable standard specifications for motor vehicle batteries as well as containers. Paragraph 12.

(xii) We recommend that the battery manufacturers should take immediate steps to introduce maximum economy in the use of lead. Paragraph 16(a).

(xiii) We recommend that the battery manufacturers should make every effort to train up the workers, so as to attain a higher output per worker and thus reduce the labour cost per battery. Paragraph 16(b).

(xiv) We recommend that a protective duty of 80 per cent. *ad valorem* should be imposed on the imports of motor vehicle batteries from the U.K. and that the duty should remain in force for a period of 3 years. Paragraph 20(a).

(xv) If, under the Indo-British Trade Agreement of 1939 and Indo-Burma Trade Agreement of 1941, the present preferential margins in favour of imports of batteries from the U.K. and Burma have to be maintained, the rates of import duty on this article should be : Standard rate 90 per cent. *ad valorem*, British Preferential rate 80 per cent. *ad valorem* and Burma Preferential rate 68 per cent. *ad valorem*. Paragraph 20(b).

(xvi) If the modifications proposed in the general agreement on Tariffs and Trade, Schedule XII-India, are approved and finally adopted, the rates would be 86, 80 and 68 per cent. *ad valorem* respectively. Paragraph 20(b).

(xvii) We also recommend that the same rate of protective duty should be levied on imports of plates for motor vehicle batteries. Paragraph 20(c).

(xviii) We do not think that the prices of the imported batteries will appreciably fall in the next 3 years. But should unforeseen circumstances cause a serious fall in the prices of the imports, so as to jeopardise the present measure of protection, the indigenous battery manufacturing industry may apply to Government to review the case, and if necessary, to adjust the duty under section 4(1) of the Indian Tariff Act XXXII of 1934. Paragraph 20(d).

(xix) If our recommendations regarding the rates of protective duty are accepted, the necessary changes in the Indian Tariff Schedule would be as shown in paragraph 21.

(xx) The indigenous manufacturers claimed certain other kinds of assistance, which we do not consider to be justifiable. Paragraph 22.

(xxi) The continuance of the present import control on motor vehicle batteries, though it may be necessary for conserving foreign exchange resources, will not be required as a means of protecting the industry. Paragraph 23.

(xxii) The grant of protection to this industry will not impose an excessive burden on the users of motor vehicle batteries. Paragraph 24.

(xxiii) We are satisfied that the industry is eligible for protection. Paragraph 25.

(xxiv) In case the two foreign companies, namely, Chloride Storage and General Motors, expand their production of batteries to the serious detriment of the Indian manufacturers, we recommend that Government should adopt necessary measures to safeguard the Indian section of the industry. We also recommend that Government should enunciate, at an early date, their policy regarding the employment of foreign capital and enterprise in this country. Paragraph 26.

28. The Board wishes to express its thanks to Dr. P. K. Kapre of the Directorate-General of Industry and Supply (General and Electrical Development), Government of India, Mr. M. Ahmadullah, Secretary to the Board, Dr. Rama Varma, Assistant Secretary to the Board, Mr. P. V. R. Rao, Cost Accounts Officer attached to the Board, Mr. R. N. Kapur, Board's Technical Adviser, and Mr. S. D. Sunawala, formerly Technical Adviser to the Board, for their valuable help and co-operation in connection with the inquiry.

Acknowledgments.

G. L. MEHTA,
President.

H. L. DEY,
Member.

B. V. NARAYANASWAMY NAIDU,
Member.

M. AHMADULLAH,
Secretary.

BOMBAY,
8th March 1948.

APPENDIX I.

List of Firms to whom Board's questionnaire was issued and who submitted their replies.

PRODUCERS :

*1. Amco Limited, Mehar Building, Chowpatty, Bombay.
*2. Bharat Battery Manufacturing Co. Ltd., P-1A, Rash Bihari Avenue, Ballygunge, Calcutta.
*3. Chloride Electrical Storage Co. (India) Ltd., 4, Lyons Range, Calcutta.
*4. Eastern Accumulator Co., 3, Mangoe Lane, Calcutta.
†5. Electro Chemical Industries, 9, Jogesh Mitra Road, Bhowanipore, Calcutta.
6. Electrical Storage Co., 112, Narkeldanga Main Road, Calcutta.
†7. Estrela Batteries Limited, Yusuf Building, Churchgate Street, Bombay.
‡8. Flash Lights (India) Limited, 135, Princess Street, Calcutta.
†9. General Motors (India) Limited, Sewree, Bombay.
10. Himco (India) Limited), Kurla Road, Andheri.
‡11. Heatly & Gresham Limited, 135, Princess Street, Calcutta.
*12. Indian Battery Manufacturing Co. Ltd., 9-A, Ramdhone Mitra Lane, Calcutta.
†13. Imperial Battery Co., Madras. (Not regular manufacturers ; but only rebuilders of batteries).
‡14. Josts Engineering Co. Ltd., 19, British India Street, Calcutta.
‡15. Kaycee Industries Ltd., 3 and 4, Chittaranjan Avenue, Calcutta.
†16. Mojumder Battery Co. (India) Ltd., 3|1 Mohon Bagan Lane, Shambazaar, Calcutta.
17. Mohammad Ali & Brothers, Naya Bazaar, Dhanbad.
18. National Battery Manufacturing Corporation, 27-A. Russa Road, Calcutta.
‡19. National Carbon Co. (India) Ltd., 28, Pollock Street, Calcutta.
20. Oriental Mercantile Co. Ltd., 36-A & B, Pratapaditya Road, Calcutta.
21. Shakti Batteries Ltd., 124|LA., Russa Road, Calcutta.
*22. Standard Batteries Limited, 43, Forbes St., Fort, Bombay.
*23. Tropical Accumulators Limited, 32B, Mohim Halder St., Calcutta.
*24. Utility Trades Corporation Ltd., 59, Forbes St., Bombay (Not regular manufacturers ; but only rebuilders of batteries).

IMPORTERS :

1. Addison and Co., Ltd., Mount Road, Madras.
2. Amco Limited, Meher Building, Chowpatty, Bombay.
3. Auto Friends, P-74, Bentick St., Calcutta.
‡4. Auto Service Garage, The Mall, Cawnpore.
*5. Amzel Limited, Opp. Roxy Cinema, Queens Road, Bombay.
6. Bharat Battery Mfg., Co., Ltd., P-1A, Rashbihari Avenue, Calcutta.
7. Burma Oil Co. (Indian Trading) Ltd., Post Box 2039, Chowringhee Square, Victory House, Calcutta.
*8. Bombay Garage Limited, Post Box No. 566, Bombay.
*9. Chloride Electrical Storage Co., India Ltd., 4, Lyons Range, Calcutta.
10. Continental Motor House, 9, Ashutosh Mukherji Rd., Calcutta.
*11. Chimanlal Desai and Co., Homji St., Fort, Bombay.

*12. Crompton Engineering Co. (Madras) Ltd., 2nd Line Beach, Madras.
*13. R. K. Dundas (Eastern) Ltd., Laxmi Bldg., Sir P. M. Road, Bombay.
14. Das and Bhownick, 2, Dalhousie Sq., Calcutta.
‡15. Eastern Accumulator Co., 3, Mangoe Lane, Calcutta.
16. Flash Lights (India) Ltd., 135, Princess St., Calcutta.
*17. Ford Motor Co. of India Ltd., Swadeshi Mills Compound, New Queens Rd., Bombay.
‡18. French Motor Car Co., Ltd., 234|3 Lower Circular Road, Calcutta.
‡19. General Trading Co., 9|2, Waterloo St., Calcutta.
*20. General Motors (India) Ltd., Sewree, Bombay.
*21. Ganeshdas Ramgopal, Hazratganj, Lucknow.
‡22. Greaves Cotton and Co., Ltd., 1, Forbes St., Bombay.
‡23. Heatly and Gresham, 9, Forbes St., Bombay.
24. Howrah Motor Accessories Agency Ltd., 3, Mangoe Lane, Calcutta.
25. Howrah Motor Co., Ltd., P-6, Mission Row Extension, Calcutta.
26. International Traders Ltd., Post Box 362, Karachi.
‡27. Josts Engineering Co., Ltd., 19, British India St., Calcutta.
28. Kaycee Industries Limited, 3, Chittaranjan Avenue, Calcutta.
*29. Lucas Indian Service Ltd., 15, New Queens Rd., Bombay.
*30. Mousell and Co., Ltd., 9, Mathew Road, Bombay 4.
31. National Carbon Co., (India) Ltd., 28, Pollak St., Calcutta.
32. F. & C. Osler Limited, Post Bag No. 3616, New Queens Road, Bombay 4.
*33. Peninsular Motor Corporation Ltd., 19, Convent Rd., Entally, Calcutta.
‡34. Powells Limited, Lamington Rd., Bombay 4.
‡35. Pritchett and Gold and E.P.S. Co., Ltd., 9, Forbes St., Bombay.
*36. Prestolite Battery Service Ltd., 2-2A, Queens Road, Bombay 4.
37. Quazi Nurul Hasan Hamid Hasan. New City, Etawah.
*38. V. S. Rajgopalan and Co., Ltd., Mount Road, Madras.
39. G. D. Seigell and Co., 21, Bawa Dinga Singh Bldg., Boadon Rd., The Mall, Lahore.
40. S. M. Shafiq and Co., 71, Canning St., Calcutta.
41. South Indian Export Co., Ltd., 4, McLean St., Madras.
42. Spence Ltd., 23, Convent Road, Calcutta.
43. Standard Automobile Co., The Mall, Cawnpore.
*44. Sridhar and Co., Mount Rd., Madras.
*45. Society of Motor Mfrs' & Traders Ltd., Post Box 173, New Delhi.
46. United Bus Service, Charbaugh, Lucknow.
‡47. United Motors, 3, Abbot Road Lucknow.
*48. Utility Traders Corporation Ltd., 59, Forbes St., Bombay 1.
49. Walford Transport Limited, 71, Park St., Calcutta.

CONSUMERS :

1. Allen Berry and Co., Ltd., 62, Hazra Road, Calcutta.
2. Amco Limited, Meher Bldg., Chowpatty, Bombay.
3. Auto Service Garage, The Mall, Cawnpore.
4. Bharat Battery Mfg., Co., Ltd., P-1A, Rashbihari Avenue, Calcutta.
*5. Bombay Tyre and Rubber Co., Ltd., Radio House, Apollo Bunder, Bombay.

6. Burma Oil Co., (India Trading) Ltd., Post Box 2039, Victory House, Chowringhee Sq., Calcutta.
*7. M. S. Bhoost and Sons, Gadag.
*8. Bombay Garage Limited, Band Stand, Chowpatty, Bombay.
9. Central Automobiles, Laxmi Bhawan, Sandhurst Road, Bombay.
*10. Controller of Telegraph Stores, Alipore, Calcutta.
*11. Commercial Carrying Co. (Assam) Ltd., 11, Clive Row, Calcutta.
*12. Chandulal Mehta and Co., Saklat House, New Queens Rd., Bombay.
13. City Motor Service Limited, 36, Whites Road, Madras.
*14. Dewar's Garage and Eng., Works, 1 Council House St., Calcutta.
*15. Eastern Agencies, 62, Simla Jubilee, Park Road, Bangalore City.
16. Eastern Accumulator Co, 3, Mangoe Lane, Calcutta.
17. East Indian Railway, Calcutta.
18. Flash Lights (India) Ltd., 135, Princess St., Calcutta.
*19. Forbes Forbes Campbell and Co., Ltd., Karachi.
*20. Ford Motor Co., of India Ltd., Swadeshi Mills Compound, New Queens Rd., Bombay.
21. French Motor Car Co., Ltd., 234|2, Lower Circular Rd., Calcutta.
*22. F. & C. Osler (India) Ltd., Bombay.
*23. Ganeshdas Ramgopal, Hazratgunj, Lucknow.
‡24. General Electric Co. (India) Ltd., Madras.
*25. General Motors (India) Ltd., Sewree, Bombay.
26. George Oakes Ltd., Post Box. 374, 36, D Mount Road, Madras.
27. Howrah Motor Co., Ltd., P-6, Mission Row Extension, Calcutta.
*28. Howrah Motor Accessories & Electric Co., 5, Chandmari Road, Calcutta.
*29. International Traders, P.B. 362, Karachi.
*30. I.A.A.C. (Madras) Ltd., 20-B, 2nd Line Beach, G. T. Madras.
‡31. Jost's Engineering Co., Ltd., 19 British India St., Calcutta.
‡32. E. R. Joseph and Co., 9, Waterloo St., Calcutta.
33. Kaycee Industries Limited, 3, Chittaranjan Avenue, Calcutta.
34. National Carbon Co. (India) Ltd., 28, Pollack Street, Calcutta.
35. G. Nandy & Co., Ballygunj, Calcutta.
‡36. Pritchett and Gold and EPS Co. Ltd., 9, Forbes Street, Post Box 225, Bombay.
‡37. Powells Limited, Lamington Road, Bombay.
38. Peninsular Motor Corporation Ltd., 19, Convent Road, Entally, Calcutta.
‡39. Pioneer Motor & Electric Co., 227, Upper Circular Road, Calcutta.
*40. Society of Motor Manufacturers & Traders Ltd., Post Box 173, New Delhi.
41. Standard Automobile and Co., The Mall, Cawnpore.
42. Qazi Nural Hassan Hamid Hassan, New City, Etawah.
*43. Rane Ltd., New Queens Road, Bombay 4.
44. G. D. Siegell & Co., 21, Bawa Dinga Singh Bldg., Beadon Road, The Mall, Lahore.
*45. R. Sen & Co., Elgin Road, Calcutta.
*46. Simpson and Co. Ltd., Mount Road, Madras.
47. South Indian Bus Transport Ltd., St. Thomas Mount, Madras.
48. Shri Rama Vilas Bus Service Ltd., Cathedral, Madras.

‡49. T. V. Sundaram Iyengar & Sons, Ltd., Madura, South India.
*50. Tata Iron & Steel Co. Ltd., Jamshedpur, B. N. Rly.
51. United Motors, 3, Abbot Road, Lucknow.
52. United Bus Service, Charbaugh, Lucknow.
53. United Motors (India) Ltd., Hughes Road, Bombay.
*54. Vora Brothers, Fateh Manzil, New Queens Road, Bombay.
55. W. Leslie (Motors), 30, Chittaranjan Avenue, Calcutta.

ASSOCIATIONS :

In addition to all recognised Chambers of Commerce and Trade Associations, memoranda were also invited from the following :—

1. Automobile Association of Bengal, 40, Chowringhee, Calcutta.
**2. Indian Road & Transport Development Assocn., 27, Bastion Road, Calcutta.
*3. Indigenous Manufacturers Association, 6, Old Post Office St., Calcutta.
4. Southern India Automobile Association, Mount Rd., Madras.
*5. U. P. Automobile Association, 32, Canning Rd., Allahabad.
*6. Western India Automobile Association, Lalji Naranji Memorial Building, Churchgate Reclamation, Bombay.

CONTAINER MANUFACTURERS :

1. Allied Engineering Co., Ltd., Delhi.
2. Firestone Tyre and Rubber Co. of India Ltd., Haybunder Rd., Sewree, Bombay.
*3. T. Manecklal Manufacturing Co., 35, Dalal St., Bombay.
*4. Nanco Rubber Works, Coimbatore.
*5. National Rubber Manufactures, Ltd., (formerly : A. K. Sarkars Ltd.), Leslie House, 19, Chowringhee, Calcutta.

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*Indicates, those who have either replied to our questionnaire or submitted memoranda.

†Indicates, those who have submitted only rated capacity figures (Applies to producers only).

‡Indicates, those who are not interested in the enquiry.

APPENDIX II.

List of persons who attended the public enquiry and were examined.

PRODUCERS :

1. Mr. Habib N. Chinoy	representing	Amco Ltd., Meher Bldg., Chowpatty, Bombay.
2. Mr. S. P. Saha	„	Bharat Battery Mfg. Co., Ltd., P.1-A Rashbihari Avenue, Ballygunge, Calcutta.
3. Mr. Maneklal Choonilal Nanavati, and 4. Mr. H. N. Doshi	„	Estrela Batteries, Ltd.. Yusuf Bldg., Churchgate Street, Bombay.
5. Mr. L. Hansen .. .. .. 6. Mr. H. Bebbington	„	Chloride Electrical Storage Co. (India) Ltd., 4, Lyons Range, Calcutta.
7. Mr. I. H. Cheu	„	General Motors (India) Ltd., Sewree, Bombay.
8. Mr. R. D. Char, and .. .. 9. Mr. K. G. Parameshwaran	„	Standard Batteries Ltd., Vakola, Santa Cruz, Bombay.
10. Mr. M. Mozumdar	„	Tropical Accumulators, Ltd., 32, Mohim Halder Street, Clacutta.
11. Mr. S. K. Mitter, and .. .. 12. Mr. B. N. Banerji	„	Indian Battery Mfg., Co., Ltd., Ramdhone Mitra Lane, Calcutta.
13. Mr. S. K. Mitter .. .. Mr. S. P. Saha and .. .. Mr. M. Mozumdar)	„	Battery Manufacturers' Association, Calcutta.
14. Mr. S. K. Mittor	„	Indigenous Industries Association, 6, Old Post Office St., Calcutta.

IMPORTERS :

1. Mr. B. C. Suvarna	„	Amzel Ltd., Opp. Roxi Cinema, Queen's Road, Bombay.
2. Mr. A. G. Wozencroft & .. .. 3. Mr. H. Brown	„	Lucas Indian Service Ltd., 15, Queen's Road, Bombay.
4. Mr. F. Wolff	„	Mousell & Co., Ltd., 9, Mathew Road, Bombay.
5. Mr. P. J. Panday	„	Prestolite Battery Service Ltd., 2/2A Queen's Road, Bombay.
6. Mr. A. G. Townsend	„	Oldham & Sons Ltd., Manchester.

CONSUMERS :

1. Mr. Akbar N. Chinoy	„	Bombay Garage Ltd., Band Stand, Chowpatty, Bombay.
2. Mr. C. P. Mehta	„	Chandulal Mehta & Co., Saklat House, New Queen's Road, Bombay.
3. Mr. W. Ross	„	Simpson & Co., Ltd.. Mount Road, Madras.
4. Mr. R. H. Trivedi	„	Vora Bros., Fateh Manzil, New Queen's Road, Bombay.
5. Mr. M. G. Kapadia	„	Bombay Motor Merchants' Association.
6. Mr. S. Guevrek	„	Western India Automobile Assn., Lalji, Naranji Memorial Bldg., Churchgate Reclamation, Bombay.

CONTAINER MANUFACTURERS :

1. Dr. Banerjee	„	National Rubber Manufacturers Ltd., (Formerly M/s. A. K. Sarkar Ltd.,) 54/10, Chingrighatta Road, Calcutta.

OFFICIAL :

1. Dr. P. K. Kapre	„	Directorate General Industry & Supply Govt. of India.

APPENDIX III.

Extract from UTILISATION (New Series), Indian Forest Bulletin No. 124—1944, "INDIAN WOODS FOR BATTERY SEPARATORS" by Messrs. M. A. Rehman, M.Sc., and S. M. Ishaq, M.Sc., Wood Seasoning Section, Forest Research Institute, Dehra Dun :—

SUMMARY.

"The results of a detailed investigation carried out to test the suitability of a few Indian Woods for battery separators, are described in this Bulletin. The Batteries fitted with the separators made of the woods to be tested were subjected to accelerated cycles of charge and discharge. A complete record of the specific gravity of the electrolyte, its temperature, and the voltage of the cells was maintained. The cells were also tested for maintenance of charge on open circuit, internal resistance, discharge at high currents, etc. The cells fitted with Chamaecyparis lawsoniana (Port Orford cedar) were used as controls.

The results show that, out of the Indian woods tested Cupressus torulosa (cypress), and Michelia Champaca (champ) are as good as the imported wood (Port Orford cedar) for battery separators. Odina cordifolia (haldu) and Talauma phellocarpa are inferior to cypress and champ but the former can be used only in batteries which are not subjected to severe mechanical shocks and in which the expected life is only about one year."

APPENDIX IV.

Statement of recent C.I.F. Prices and Landed Costs of the Imported Motor Vehicle Batteries.

No. of plates	Name of firm.	Description.	Period.	Country of Origin.	C.I.F. Price.	Import Duty.	Clearing & other charges.	Landed Cost.	Selling price.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
					Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
13	Lucas Indian Service, Bombay.	Standard type 6 volt	1947 (June)	U.K.	42 0 0	15 2 0 (36%)	2 8 0	59 10 0	123 0 0	(Retail)
	Ford Motor Co. of India, Bombay.	6 volt	1947 (Sept)	Canada	27 9 0	12 6 5 (45%)	0 5 7	40 5 0	..	
	Chloride Electrical Storage Co., (India) Ltd., Calcutta.	Do.	From June 1947 to date.	U.K.	38 3 0	13 7 0 (36%)	0 10 0	52 4 0	..	Estimated ..
	*Collector of Customs, Madras.	Walker automobile 6 volt.	10-7-47	U.K.	43 8 0	..	..	..	..	*Source of information.
		Ajax 6 volt	7-7-47	U.S.A.	47 0 0	..	..	..	..	
	Mousell & Co., Ltd., Bombay.	Oldham, volt 90 Amp.	Latest**	U.K.	25 5 4	9 2 0	1 11 8	36 3 0	..	**Date of letter 20-11-47.
	*Collector of Customs, Bombay.	18-10657 6 volt Exide	Latest††	Canada	26 0 0	..	..	..	..	††Date of letter 27-11-47.
		6 LH/13/1	Do.	U.K.	64 11 6	..	..	..	..	
15	Lucas Indian Service, Bombay.	Standard type 6 volt	1947 (June)	U.K.	50 0 0	18 0 0 (36%)	3 0 0	71 0 0	150 0 0	
	Ford Motor Co. of India, Bombay.	6 volt	1947 (Sept)	U.K.	23 13 6	8 9 4 (36%)	0 5 2	32 12 0		
	Battery Service Ltd., Bombay. (Prestolites)	Type B1-15	(July) 1947	U.S.A.	27 0 10	12 2 9 (45%)	1 8 5	40 12 0	81 0 0	
		Type L2-90	Do.	Do.	27 4 8	12 4 6 (45%)	1 6 4	41 0 6	82 0 0	

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
15	Chloride Electrical Storage Co. (India) Ltd., Calcutta.	6 volt	From June47 to date.	U.K.	44 0 0	15 12 0 (36%)	0 10 0	60 6 0	..	Estimated
	*Collector of Customs, Madras.	Walker automobile H 6 volt	10-7-47	U.K.	46 14 0	..	..	..	..	*Source of information.
		Ajax 6 volt.	7-7-47	U S.A.	48 0 0	..	..	..	..	
	Mousell & Co. Ltd. Bombay.	Oldham, 6 volt 85 Amp.	Latest**	U.K.	29 0 0	10 8 0	2 0 0	41 8 0		**Dt. of letter 20-11-47.
	*Collector of Customs, Bombay.	3XCZ 15 H Exide.	Do.	U.K.	28 0 0	..	..	..	..	
17	Lucas Indian Service, Bombay.	Cheap type 6 volt.	June.'47	U.K.	45 0 0	16 3 2 (36%)	3 0 10	64 4 0	132 0 0	
	R. K. Dundas, Bombay.	6 volt Dagenite.	Sep. '47.	U.K.	37 2 1	13 5 10 (36 %)	1 8 1	52 0 0	..	
	Ford Motor Co. of India, Bombay	6 volt	Aug. ' 47.	Canada	32 7 6	14 9 9 (45%)	0 6 9	47 8 0	..	Figures given by firm for :—
	Battery Service Ltd., Bombay. (Prestolites).	Type L2-100	Jun. '47	U.S.A.	30 1 10	13 8 10 (45%)	1 6 4	45 1 0	90 0 0	Import duty. Clearing charges.
										Rs. A. P. Rs. A. P.
	Sridhar & Co., Madras.	TV-51 Low-120	1947	U.S.A.	42 12 0	19 3 10 (45%)	3 9 5	65 9 3	125 0 0	22 4 1 0 9 2
		GHF High 135	1947	U.S.A.	46 6 0	20 13 11 (45%)	4 9 4	71 13 3	137 0. 0	24 14 1 0 9 2
	Chloride Electrical Storage Co. (India) Ltd., Calcutta.	6 volt.	June '47 to date	U.K.	47 0 0	17 0 0 (36%)	0 10 0	64 10 0	..	Estimated
	Chimanlal Desai & Co., Bombay.	U.S.L. Type No. FM-17 (6 volt)	Present**	U.S.A.	38 1 7	..	..	55 0 0	115 0 0	**Date of 22-11-47.
	*Collector of Customs, Madras.	Walker Automobile J-6 volt	10-7-47	U.K.	50 10 8	..	..	..	..	
		National R/F-17	4-9-47	Canada	38 10 0	..	..	..	..	
	Mousell & Co. Ltd., Bombay.	Oldham 6 volt 95 Amp.	Latest**	U.K.	33 5 4	12 0 0	2 4 3	47 10 0	..	
	*Collector of Customs, Bombay.	COIAF-10657 6 volt exide	Latest††	Canada	29 0 0	..	..	..	..	††Date of letter 27-11-47.
	..	3XCZ 17 H Exide	Do.	U.K.	41 6 2	..	..	..	..	

NOTE :—Figures for c.i.f. price and landed cost are as given by the firms. Import duty has been calculated correct to the pie. Consequential adjustments have been made under landing & clearing charges.

APPENDIX V (a).

Extract from the text of Indo-British Trade Agreement (1939).

ARTICLE 9.

The Government of India undertake, in respect of goods the growth, produce or manufacture of the United Kingdom of the kinds specified in Schedule IV of this Agreement, which comply with the laws and statutory regulations for the time being in force defining Empire goods for the purpose of customs duties, that the difference between the rates of customs duties on such goods on importation into India and the rates upon similar goods the growth, produce or manufacture of any foreign country shall not be less than the margins set out in that schedule.

SCHEDULE IV.

Tariff Item	Article	Margin of preference.
75 (1)	Motor cars including taxi cabs and articles (other than rubber tyres and tubes) adapted for use as parts and accessories thereof.	7½%

APPENDIX V (b).

Extract from the text of Indo-Burma Trade Agreement (1941).

Part I.—*Tariff Treatment of Burmese goods on import into India.*

7. (b) In the case of articles which under the Indian Customs Tariff are at present subject according to origin to either a standard or a preferential rate and those rates exceed 15 per cent and 10 per cent respectively the Government of India undertake to accord a margin of preference of 15 per cent as compared with the standard rate, or 10 per cent as compared with the preferential rate, whichever is greater.

APPENDIX VI.

Extract from Part I of Schedule XII—India, to the General Agreement on Tariffs and Trade, arrived at in Geneva, 1947.

Indian Customs Tariff Item No.	Description of Products	Rate of Duty
75(1)	Motor cars including taxi cabs and articles (other than rubber tyres and tubes) adapted for use as parts and accessories thereof, provided that such articles as are ordinarily also used for other purposes than as parts and accessories of motor vehicles included in this item or in items Nos. 75(2) and 75(3) shall be dutiable at the rate of duty specified for such articles. *Note.*—Provided this Agreement does not cease to be in force in the meantime, the products provided for under the above item shall be exempt from ordinary most favoured-nation Customs duties which exceed the preferential rate for such products of United Kingdom origin— (a) by more than 6 per cent *ad valorem* for the first period of three years from the date on which this Agreement comes into force; (b) by more than 3 per cent *ad valorem* from the beginning of the fourth year of coming into force of this Agreement; and (c) by any amount, from the beginning of the seventh year of coming into force of this agreement.	

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GOVERNMENT OF INDIA

MINISTRY OF COMMERCE

REPORT OF THE INDIAN TARIFF BOARD

ON THE

PICKERS INDUSTRY

BOMBAY

1948

PRINTED IN INDIA FOR THE MANAGER OF PUBICATIONS DELHI
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REPORT ON PICKERS INDUSTRY

Application for protection and reference to the Board.

The case of the pickers industry for protection or assistance was referred to the Tariff Board for investigation by the then Department of Commerce, Government of India in their Resolution No. 218-T(55)|45, dated the 12th October 1946, read with paragraphs 2 and 7 of their Resolution of the same number, dated the 3rd November 1945 and paragraph 4 of the Resolution also bearing the same number, dated the 16th February 1946. The reference arose out of an application for protection to the pickers industry made by the Ahmedabad Picker Manufacturers' Association in their communication No. DK|Pres|46, dated the 19th February 1946, addressed to the then Department of Commerce.

Terms of reference.

2. This inquiry is under the terms of reference stated in the Government of India Resolution, dated the 3rd November 1945, which are as follows:—

(i) that the industry is established and conducted on sound business lines ;

(ii) (a) that, having regard to the natural or economic advantages enjoyed by the industry and its actual or probable costs, it is likely within a reasonable time to develop sufficiently to be able to carry on successfully without protection or State assistance; or

(b) that it is an industry to which it is desirable in the national interest to grant protection or assistance and that the probable cost of such protection or assistance to the community is not excessive.

Where a claim for protection or assistance is found to be established, that is, if condition (i) and condition (ii) (a) or (b) are satisfied, the Board may recommend:—

(i) whether, at what rate and in respect of what articles, or class or description of articles, a protective duty should be imposed;

(ii) what additional or alternative measures should be taken to protect or assist the industry, and

(iii) for what period, not exceeding three years, the tariff or other measures recommended should remain in force.

In making its recommendations the Board has to give due weight to the interests of the consumer in the light of the prevailing conditions and also consider how the recommendations affect industries using the articles in respect of which protection is to be granted.

Method of inquiry.

3. (a) On the 18th October 1946, the Board issued a press communiqué inviting all firms, associations and persons interested in the industry, who desired their views to be considered by the Board, to submit their representations. Detailed questionnaires were issued to all the known producers, importers, consumers as well as to the Provincial Directors of Industries and to the various Chambers of Commerce and Trade Associations. A list of those to whom questionnaires were issued and who submitted their replies is given in Appendix I. Mr. P. V. R.

Rao, Cost Accounts Officer attached to the Board, visited the factory of Pickers Limited, Ahmedabad, on the 30th June 1947 and costed it with the assistance of Mr. S. D. Sunawala, who was then a Technical Adviser to the Board. The factory of Hides and Leather Products, Ltd., Ahmedabad, was also costed by the Cost Accounts Officer on the 16th September 1947. The Cost Accounts Officer also visited the factory of National Leather Industries, Bombay, at Dharavi on the 19th June 1947. This factory could not be costed as the firm did not maintain proper accounts and records. An estimate of the costs was, however, obtained from the firm.

(b) The hearing of the oral evidence in this case, which had been originally fixed for the 24th and 25th July 1947, had to be postponed as the Board did not have a full complement of Members at the time. The inquiry was again taken up when the reconstituted Tariff Board met in Bombay in November 1947. The President visited the factory of Pickers Limited, Ahmedabad, on the 3rd March 1948. Mr. R. N. Kapur, Technical Adviser attached to the Board, visited the factories of (i) Western India Tanneries, Ltd., Bombay, and (ii) National Leather Industries, Bombay, which are both at Dharavi, on the 3rd March 1948. Mr. U. V. Shenoy, Technical Assistant of the Board, visited Thangadh in Kathiawar (Saurashtra) on the 13th March 1948 and made an investigation into the special problems of the industry at that place which is mostly run on a cottage industry basis. Dr. H. L. Dey visited the National Chamois Works, Ltd., at Calcutta, on the 24th March 1948.

(c) As considerable time had elapsed since the costing of the factories, the Cost Accounts Officer recosted the factories of (1) Pickers Limited, Ahmedabad and (2) Hides and Leather Products Ltd. Ahmedabad, on the 23rd March 1948.

(d) The public inquiry was held on the 15th and 16th April 1948, in Bombay, when representatives of manufacturers, consumers and importers were examined. A list of the persons who attended the inquiry and were examined is given in Appendix II.

4. (a) The application for protection made by the Ahmedabad Picker Manufacturers' Association was confined to pickers used in the cotton textile industry. When, however, the Board's questionnaires were issued to the various known producers, importers and consumers, one of the principal importers of pickers enquired whether pickers used in the jute industry would also come within the scope of the inquiry in terms of the press communiqué. The Board, therefore, forwarded a copy of this letter to the then Department of Commerce on the 8th February 1947. In their letter, dated the 10th March 1947, the then Department of Commerce informed the Board that the reference to the Board comprised all pickers, including jute pickers. On the 20th March 1947, the Board, therefore, issued a press communiqué stating that the inquiry would cover all pickers, namely, pickers used in (i) cotton textile, (ii) jute, (iii) woollen and (iv) silk industries. Communications were also sent to all the known producers, importers and consumers as well as various associations on the 24th March 1947, announcing the enlarged scope of the inquiry. Supplementary replies were also invited from such of the parties as had already forwarded their replies to the questionnaire in respect of cotton textile pickers.

Scope of inquiry.

(b) Since there had been no satisfactory response to the announcement made by the Board in March 1947, another press communiqué was issued by the Board on the 29th October 1947, stating that unless replies were received from jute, woollen and silk picker manufacturers, the Board would have to confine its inquiry to pickers used in the cotton textile industry. In response to this press communiqué, some producers of jute pickers in Calcutta, Ahmedabad and Thangadh (Kathiawar) sent replies to the questionnaire and supplied information in regard to their rated capacity as well as their cost of production.

History of the industry.

5. Factories for the manufacture of pickers were first started in India as early as 1914. During the course of the inquiry, the Ahmedabad Picker Manufacturers' Association stated that there were about forty factories in operation after the end of the first World War of which only three were able to survive foreign competition and were in existence in 1939. We had no means of verifying these figures but it is probable that in the inter-war period, pickers industry had like some other industries languished for want of support from consumers. During the second World War, however, conditions became more favourable and factories manufacturing pickers were established and expanded to meet large and urgent requirements of the textile industry. Supplies of pickers from the U.K. were largely cut off because industries in that country had to be diverted mainly to war production while sea transport became very difficult. Moreover, supplies of raw materials like buffalo hides from Java and China were not available and the lack of these raw materials made it impossible for the British or other foreign competitors to supply pickers in adequate quantity to this country. These factors helped the revival of the pickers industry which made considerable headway during the war years despite serious difficulties in obtaining raw materials such as hides and chemicals. From a few struggling firms in 1939, the number of manufacturing firms rose to about sixty at the end of 1945. (Appendix III(a) gives the name, location and the rated capacity of the manufacturers who submitted information regarding the rated capacity). The production of pickers was small in the early years of the war but the output increased to about 20,000 gross in 1945. All the pickers factories except seven are located in the Bombay Province including Kathiawar while nearly 75 per cent. of the total production is by factories situated in and around Ahmedabad. The seven factories located outside the Bombay Province are in Calcutta and manufacture pickers for the jute industry. Many of these factories are small units using local materials and several of them have seasonal production. The quality of the product, therefore, varies from factory to factory and even from season to season. In certain factories as in Bombay, for example, pickers are manufactured along with other leather articles, such as, beltings and buffers. The majority of picker manufacturers in this country are engaged in the production of standard (4-B round foot) pickers used in the cotton textile industry. They also manufacture other kinds of pickers, such as the drop box used in weaving pattern cloth as well as pickers used in jute, woollen, silk and rayon manufacture. It was stated in the course of the oral evidence that 90 per cent of the total production is of the 4-B round foot type while the balance of 10 per cent comprises other types.

6. Pickers are used as accessories on looms in textile mills and power loom factories. The function of a picker is to propel the shuttle across the width of the loom for inserting the weft in the cloth that is being woven.

Uses of the product.

7. (a) The principal raw materials required for the manufacture of pickers are (1) raw buffalo hides, (2) sperm oil, (3) sodium sulphide, (4) wires and wire nails, (5) panel pins, (6) lime, (7) sulphuric acid and (8) caustic soda. Practically all the raw materials with the exception of sperm oil and panel pins are produced in the country.

Raw materials.

(b) (i) The quality of pickers depends mainly on the quality of hides. The cost of raw hides constitutes a large element in the total production of pickers and has been estimated in a representative factory to be 67 per cent of the fair selling price of the finished product. India produces abundant quantities of hides but they are not always of the requisite quality nor are they uniform in standard. Indian buffalo hides which are used for the manufacture of pickers are admittedly inferior to Batavian and Chinese hides. The Leather Technologist, Government Tanning Institute, Bombay, who assisted us at the public inquiry stated that the Indian hides were inferior to the Batavian by about 5 or 10 per cent. He was also of the view that this inferiority of the indigenous hides was mainly due to defective curing methods. This opinion was supported by some of the manufacturers present at the inquiry. It was also stated that it was not possible to correct this defect of the Indian hides by any process in the pickers factory itself. Apart from the intrinsic quality of the hides, which depends upon the breed of the cattle and their climatic environment, curing is an important factor for the tanning industry as a whole. It is desirable that this question of curing should receive the immediate attention of the authorities concerned with leather technology. We understand that several Provinces have got Leather Development Officers while the Central Government have their own Development Directorate. Recently, the Central Leather Research Institute has also been established at Madras. We recommend that the question of improving the quality of indigenous hides through better curing and other appropriate methods should receive the earnest consideration of these authorities.

(ii) Hides for the pickers industry were obtained in the past mainly from Bareilly in the U.P., some centres in the Punjab and Peshawar in the North West Frontier Province. Locally produced hides are also used by several factories but hides obtained from the U.P. and the Frontier are of a superior quality. Since the partition of India, it has been difficult to obtain hides from the West Punjab and the Frontier and the industry has to rely on Bareilly as the main source of supply of hides of a better quality. The Pakistan Government issued a notification on the 16th March 1948, whereby hides and skins of all kinds and tanned leather are subject to export trade control. We understand, however, that in practice export licences are issued freely by the Pakistan Government. But there is an export duty of 10 per cent. levied on hides by the Pakistan Government. There is, however, no import duty on raw hides from Pakistan into India. We suggest that in negotiating a trade agree-

ment between India and Pakistan, the requirements of India in respect of hides and skins should be borne in mind till such time as the Indian industry is in a position to obtain suitable hides within the country itself.

(iii) The representatives of the manufacturers at the public inquiry demanded facilities for importing hides from China in order to enable them to have a raw material nearly of the same quality as that used by the British manufacturers. We have dealt with this question at the appropriate place but have to observe here that one of the main considerations kept in view by the Tariff Board in recommending protection to an industry is the availability of the principal raw material in the country. This raw material in the case of the pickers industry is available in abundant quantity. It is, therefore, important that the material which is locally available should be improved scientifically so as to bring it up to the standard of the raw material used for the imported pickers.

(iv) As regards the difficulty of obtaining raw hides from abroad, there is no ban on such imports, and hides and skins are freely licensed for imports from non-dollar areas, although it is not possible to import them from dollar areas owing to exchange difficulties. The manufacturers drew our attention to the fact that in reply to some of their inquiries, they were advised last year by the exporters of the Batavian hides that the export of Batavian hides to India was prohibited and that such export was only permitted to the Netherlands, Great Britain and the U.S.A. for the time being. If these restrictions still continue and the manufacturers experience difficulties in importing hides owing to any agreement or understanding either by the Government of the countries concerned or between the combines of manufacturers and producers, they should obtain authentic information on the subject and represent their case to Government.

(v) During the inquiry it was mentioned that the British leather manufacturers had the advantage of subsidised raw materials. It is true that a subsidy system was in operation in the United Kingdom in respect of several raw materials in order to keep down the cost of production but we learn on inquiry that the Batavian hides from which pickers are normally made in the United Kingdom were not subsidised at any time.

(c) *Sperm Oil.*—Sperm oil obtained from whale is also an essential material for the manufacture of pickers. Before the war, the main sources of supply for this oil were Norway and the United Kingdom. During the war, however, South Africa supplied sperm oil to India. Since commercial relations between India and South Africa had been cut off and South African products are not allowed to be imported into this country, it is not possible to obtain sperm oil from South Africa. Pickers Limited, Ahmedabad, obtained last year 87 drums (3,480 gallons) of sperm oil from the United Kingdom but the price which had to be paid for it was about Rs. 13 per gallon as against the price of Rs. 4-8-0 per gallon for the same kind of oil imported from South Africa during the war. We were advised at the public inquiry by both the manufacturers' representatives and the experts that it was not possible to have any suitable substitute for sperm oil. The Textile Commissioner in his letter No. MFS|2|58, dated the 3rd April 1948 informed the Board that his office had addressed communications to the Directors of Fisheries in India inquiring whether

there was any suitable substitute for sperm oil. The office of the Textile Commissioner had not up to the date of writing this report received replies from the Directors of Fisheries. The weight of opinion, however, seems to be against the possibility of finding any substitute in the immediate future. The Textile Commissioner also stated in the letter referred to above that he had tried to explore the possibility of obtaining supplies of sperm oil from the U.S.A., Australia and Norway but had not so far succeeded in finding any alternative source of supply. We understood from the representative of Messrs. Jay Hind Leather Industries, Ltd., of Kalol who were shortly going into production that they had recently an offer of supply of sperm oil from the U.S.A. at a price which compared favourably with the United Kingdom price of Rs. 13. But exchange difficulties had to be overcome before this oil could be imported from the U.S.A. We would suggest, that apart from the sources of supply mentioned by the Textile Commissioner, the possibility of obtaining supply from other alternative sources and particularly from Japan, might be investigated. We might add that the price of sperm oil which had been taken in estimating the cost of production is Rs. 13 per gallon. Although such oil is subject to import control, there is no control over internal distribution. Some of the manufacturers pressed for removal of reduction of duty of 30 per cent. on this oil. Since the incidence of the duty on the cost of production of pickers is practically negligible, we do not recommend its removal.

(d) *Sodium Sulphide.*—Sodium sulphide is an important chemical required for the industry. The total quantity of sodium sulphide needed for the pickers industry, if its production is at the rate of 35,000 gross of pickers, would be roughly about 20 tons. The price of sodium sulphide has gone up from Rs. 19 per cwt. during the war period to Rs. 37 per cwt. in 1948. The manufacturers complained that they were unable to obtain the minimum quantity required by them from the Imperial Chemical Industries. We think it desirable that the picker manufacturers should pool their requirements and then collectively negotiate with the Imperial Chemical Industries with a view to obtaining an adequate quantity of this chemical. Since this chemical is no longer controlled by the Government, such direct negotiations would be helpful ; but in case satisfactory arrangements are not arrived at, the industry should approach the Ministry of Industry and Supply, Government of India so that their good offices could be made available for securing an adequate quantity of this chemical for the industry.

(e) *Other raw materials.*—Wire and wire nails and panel pins are also essential for the manufacture of pickers. As regards panel pins particularly, our attention was drawn to the fact that the Indian steel wire industry has not been able to supply such pins and that they are mostly imported from Belgium and Czechoslovakia. We feel, however, that this is a matter for direct negotiation between the picker industry and the manufacturers of wire nails and pins.

Process of manufacture.

8. The process of manufacture of pickers is simple and does not require elaborate machinery or highly skilled labour. Buffalo hides are dehaired with the aid of chemicals such as sodium sulphide and lime. The cleaned dehaired hides are then dried. They are soaked in water and covered up with gunny cloth to make them supple and

pliable. The hides are then cut into requisite pieces which are approximately 14 in. × 4 in. Each piece is folded up, nailed with panel pins and rivetted. It is then put in a hand screw press and subjected to pressure. The initial pressing gives it the rough shape of a picker while two further pressings complete the process. The picker is bored to receive the spindle and slotted on the top to receive the picking band. Pickers are then completely dried in the open air before they are immersed in sperm oil for a few months. They are then taken out of the oil and hung up in the air to mature. The quality of pickers depends not only on the quality of hides, but also on seasoning and maturing which should be done for a proper period. For proper seasoning about six months are required. This results in a slow turnover and consequent locking up of a comparatively large amount of capital in the process of production.

By-product.

9. The cuttings left over from the dehaired hides, after removal of the selected portions for making pickers, can be profitably used for the production of glue. Such glue is produced by boiling the cuttings in water and evaporating the extract thus obtained. But the cuttings left over at most of the factories in India are not adequate for the establishment of a glue plant of an economic size, which itself is costly. A few of the picker manufacturers do, however, convert these cuttings into glue by crude processes, while others dispose them of at cheap rates for manures. This is hardly satisfactory. The possibilities of developing glue on modern lines as a by-product of the pickers industry should be explored. The Cottage and Small Scale Industries Committee appointed by the Government of Bombay in 1946 has also drawn attention to this matter. We suggest that picker manufacturers at each important centre should combine and try to establish a glue manufacturing plant on an economic scale.

Estimated domestic demand.

10. The estimated demand for cotton textile pickers as submitted by the Ahmedabad Picker Manufacturers' Association was 35,000 gross per year. The Textile Commissioner to the Government of India also endorsed this. The demand for jute pickers was given as 4,250 gross per year by the Indian Jute Mills Association, Calcutta. These figures were discussed at the meeting and the general trend of opinion was that the total demand would be 42,000 gross comprising 36,750 gross for cotton textiles, 4,500 gross for jute and about 750 gross for woollen and silk industries. But the total of indigenous production and imports of all types of pickers was only 27,702 gross in 1945, 28,399 gross in 1946 and 27,770 gross in 1947. These figures indicate that the estimated demand of cotton textile pickers as given by the producers was on the high side. Making reasonable allowance for the probable expansion of loomage in the cotton textile industry in the next three years, the demand for cotton textile pickers may be put at 30,000 gross per year. To this should be added another 4,250 gross for jute and about 750 gross for silk and woollen industries. Thus, the total demand for the next three years comes to 35,000 gross of pickers per annum.

Domestic production.

11. The rated capacity of the factories working at present is about 50,000 gross of pickers of all kinds. But from the returns submitted to the Board, the actual production of all kinds of pickers was about 20,000 gross in 1945, 18,000 gross in 1946 and 13,000 gross in 1947. Ap-

pendix III (b) gives the actual production of different units for the last three years as submitted to the Board. The returns submitted to the Board are, however, not complete as many producers did not reply to the Board's questionnaire. During the course of our inquiry, it was contended that the fall in production during the last two years had been mainly due to an increase in imports. It was also pointed out that in this industry, production could be easily adjusted to the demand so that it would not be difficult to step up production if there were an increased demand for Indian pickers.

Quality of Indian pickers.

12. The quality of the picker is generally determined by the length of its service or durability as well as by the ease with which it moves on the loom. Its serviceability no doubt depends to a large extent on the type and the age of the loom, the speed at which it works and the type of the shuttle used. These questions were fully discussed at the public inquiry. There was some difference of opinion regarding the precise number of loom hours for which an indigenous picker operates as compared with an imported picker. It is necessary to emphasise that such comparisons are valid only if the test is methodical and carried out for some length of time and on similar looms. Nevertheless, the weight of evidence showed that Indian pickers have a shorter life than the imported ones. The consensus of opinion at the inquiry was that, while pickers produced by Indian manufacturers did reach in many cases a standard as good as that of the imported picker, a uniform standard was not being maintained. There are several reasons for this lack of a uniform standard. The manufacture of such small textile accessories is undertaken by several individual producers like *moochis* and others doing leather and tanning work, who, along with the established manufacturers in the line, offer their products to the textile mills. Because of the war-time scarcity of such accessories and the high prices that they fetched, many individuals and small factories took to this line, while others expanded their production. In many units, this was a side line while some others took it up as a temporary job work. Moreover, since some of these smaller units could supply the pickers at lower prices due to their cheaper cost of production, they were able to dispose of their products without much difficulty. The fact, however, that there was such ill-regulated production and non-standarized manufacture brought down the quality of the indigenous product. Some of these units have closed down or reduced their production during the last year or two. But there is no doubt that, so far as the established factories are concerned, there has been a distinct improvement in the quality of indigenous pickers. It may be mentioned in this connection that the quality of the imported pickers also deteriorated during war-time owing to the difficulty of obtaining hides of the requisite quality. There are at present two varieties of pickers manufactured in the U.K., one of which called, G.C.M. (Government Controlled Material) being inferior and the other being superior in quality. We understand that the bulk of production which at present is G.C.M. is not up to the standard of the pre-war quality. But the British manufacturers are endeavouring to reach the pre-war standard as speedily as possible. It is, therefore, all the more necessary for the Indian picker manufacturers to improve the quality and maintain a uniform standard of their products. They should pay greater attention to such questions as the selection and grading of

hides used in the manufacture of pickers, the length of time for steeping, the use of oil of the required quality, the type of rivets used, and above all, to workmanship. From the consumer's point of view, it is essential for a mill which uses Indian pickers to rely on its obtaining pickers of standard quality. Indian manufacturers can and do produce pickers of standard quality ; but, as already observed, it is essential to evolve and maintain uniform standards for their products. We were informed that a special sub-committee had recently been appointed by the Indian Standards Institution to go into the question of standards for pickers. We were also given to understand that the pickers for cotton textiles would, in future, be stamped by the Textile Commissioner according to their grade and quality. Similar action should be taken by the authorities concerned in respect of pickers used in jute, silk and woollen industries. We recommend that the Indian Standards Institution should formulate specifications and standards which the manufacturers of pickers, in the interest of sound development of the industry, should rigidly comply with.

Imports.

13. The bulk of imports into India has been coming from the United Kingdom although the Netherlands is also a source of supply. In 1937-38 the total imports from all sources were 5,865 cwts. (16,422 gross)* of pickers. The largest imports were in 1939-40 when the figure was 7,780 cwts. (21,784 gross). This came down to 1,847 cwts. (5,172 gross) in 1944-45. Since then the imports have been steadily increasing and in the first four months of 1947-48 1,652 cwts. (4,626 gross) were imported. Appendix IV gives the quantity and value of imports of pickers in India since 1937-38. At present there is an overall monetary ceiling on the import of pickers, both from the dollar and non-dollar areas.

Existing rate of import duty.

14. ' Pickers ' appears under item 72(1) of the First Schedule to the Indian Tariff Act, XXXII of 1934 as in operation on 1st January 1948. The relevant extract from the Indian Customs Tariff, 28th issue, is given below :

Item	Name of Article	Nature of duty	Standard rate of duty	Preferential rate if the article is the produce or manufacture of		
				U.K.	British Colony	Burma
72 (1)	The following textile machinery and apparatus by whatever power operated namely—					
	..... temples and pickers, picking bands, picking sticks;	Revenue	10% *ad valorem*	..	..	Free.

* Figures in brackets are only approximate. The conversion of cwts. into gross has been made at the rate of one gross per 40 lbs. The Annual Statement of Sea-Borne Trade does not show separately the quantities of pickers imported for cotton textile, jute, woollen and silk industries. As the weights of different types of pickers vary, the conversion ratios also differ. A uniform conversion *ratio is*, therefore not feasible. But as 4-B round foot cotton textile pickers constitute the bulk of Indian demand and consequently of imports, the conversion ratio of this type of pickers, *i.e.* 40 lbs.=gross has been adopted.

15. The Board received the figures of c.i.f. prices of 4-B round foot pickers from 8 importing firms as well as Collectors of Customs, Bombay, Calcutta and Madras. The prices showed wide variations, the lowest figure being Rs. 141-2-4 per gross and the highest Rs. 223-1-9 per gross. These prices were generally for the period February to April 1948. We were informed at the public inquiry that this wide disparity in prices was mainly due to the difference in the quality of hides used in the pickers. During the war and until lately most of the U.K. manufacturers were using hides supplied by their Government and in such cases the prices were generally low. For the purpose of estimating the landed cost, we take the lowest c.i.f. price of competitive imports. So far as jute pickers were concerned, the lowest c.i.f. price was Rs. 335-9-4 per gross. The lowest c.i.f. prices and landed costs of cotton textile and jute pickers are given below :—

C.i.f. prices and landed costs.

ORIGIN OF IMPORTS—U.K.

Period of imports—March 1948.

	Cotton textile pickers—4-B round foot	Jute pickers.
	Rs. As. Ps.	Rs. As. Ps.
(*a*) c.i.f. price	141 2 4	335 9 4
(*b*) Customs duty	14 1 10 (10%)	33 8 11 (10%)
(*c*) Clearing charges	1 1 5	16 12 6
Landed cost ..	156 5 7	385 14 9

A detailed statement of different c.i.f. prices is given in Appendix V.

16. (a) Three factories were selected for the purpose of cost investigation, namely, Pickers Ltd., Ahmedabad, Hides and Leather Products Ltd., Ahmedabad and the National Leather Industries, Bombay. Of these, the last firm does not maintain proper records from which costs could be worked out. It submitted however an estimate of cost. Of the other two factories, we have taken the cost of Pickers Ltd., Ahmedabad as the basis for our estimates, because of its larger production and general efficiency. The period selected for costing was the year 1947.

Estimate of cost of production and fair selling price.

(b) During 1947, the production of Pickers Ltd., was 3,203 gross of 4-B round foot pickers, 67 gross of drop box pickers and 73 gross of jute pickers. This factory also manufactured glue as a by-product from hide cuttings. As 4-B round foot pickers constituted 96 per cent. of the total number of pickers produced by the firm, this type was selected as the representative item for costing. For purposes of distribution of overheads and similar other charges, the production is expressed in

terms of 4-B round foot pickers by converting the small number of jute and drop box pickers into 4-B round foot at the ratio of 2 : 1. As the firm desired that their cost data should be treated as confidential, the details of the estimates of cost are not included in this report but are separately submitted to Government as a confidential enclosure.

(c) The estimate of the fair selling price requires some explanation. As already observed, the cost of hides constitutes about 67 per cent. of the fair selling price of pickers. In estimating the future cost, the average price of Bareilly hides as obtained by the firm in 1947 is taken into account. In fixing this price of hides the manufacturers contended that the cost of hides would go up at least by Rs. 20 if quality had to be improved. It was also stated that at present they were using all the portions of the hides, which is not desirable if proper quality is to be maintained. In estimating the fair selling price, however, the Board has not allowed for any increase in the price of hides over that of 1947. Secondly, it was disclosed during the inquiry that the price of sperm oil taken by the Cost Accounts Officer at the time of estimating costs was the price of South African oil which came only to Rs. 4-8-0 per gallon whereas the sperm oil available from other sources costs Rs. 13 per gallon at present. In the final estimate of the fair selling price, the Board has taken the price of sperm oil at Rs. 13 per gallon as the South African sperm oil is not likely to be available to India.

(d) Lastly, an allowance of 20 per cent. has been made in respect of prejudice against Indian pickers. The extent of prejudice was discussed at length at the public inquiry, when the importers and consumers agreed that customers would prefer to purchase British pickers by paying about 20 per cent. more than for Indian pickers. We were further given to understand that pickers made in India are occasionally passed off as foreign-made pickers and sold with the stamp of 'Made in U.K.', while half-formed pickers are even exported to the U.K. and brought back in a finished stage. One of the manufacturers went to the length of stating that he had been informed by several Indian dealers that if he could supply his pickers with the stamp 'Made in England' they would purchase freely and at prices 20 to 30 per cent. higher than those of the Indian pickers of the same quality. We have no reason to disbelieve these statements and can only attribute this practice to a psychological attitude, which involves the element of prejudice against Indian made article. We have therefore allowed 20 per cent. for prejudice as reasonable.

(e) Working capital has been taken at six months cost of production and interest has been allowed thereon at 4 per cent. We have also allowed a return of 10 per cent. on gross block.

(f) The estimated fair selling price of 4-B round foot pickers for the year 1947-48 comes to Rs. 148-1-11 per gross.

(g) It has not been possible to cost any factory manufacturing jute pickers, since the response from jute picker manufacturers came very late. But the manufacturers agreed that as there was little difference in the process of manufacture, the quantum of protection for cotton textile pickers would be sufficient for jute pickers also. We have, however, been able to obtain their estimated cost and taking it as the basis, the fair selling price including 20 per cent. allowance for prejudice works out at Rs. 365 per gross.

17. Following is the comparative statement of landed cost and fair selling price of 4-B round foot pickers and jute pickers :—

Comparative statement of landed cost and fair selling price.

Comparative statement of landed cost and fair selling price.

	Cotton textile—4-B round foot			Jute		
	Rs.	As.	Ps.	Rs.	As.	Ps.
(*a*) C.i.f. price	141	2	4	335	9	4
(*b*) Customs duty	14	1	10 (10%)	33	8	11 (10%)
(*c*) Clearing charges	1	1	5	16	12	6
(*d*) Landed cost	156	5	7	385	14	9
(*e*) Landed cost without duty	142	3	9	352	5	10
(*f*) Fair selling price of indigenous pickers (including for prejudice of 20%)	148	1	11	365	0	0
(*g*) Difference between fair selling price and landed cost without duty	5	14	2	12	10	2
(*h*) Percentage of (*g*) to (*a*)	4·17%			3·76%		

Figures in the above table would indicate that a duty of 4 per cent. will be necessary to equate the price of the imported article with that of the indigenous product.

Eligibility for protection.

18. We are satisfied that the Indian Pickers industry fulfils the conditions laid down by Government in their Resolution referred to in paragraph 2 of this Report. The principal raw materials are available in the country. There is also a very large home market for the product. The process of manufacture is simple and production can be expanded to meet the demand. We think the industry on the whole has been conducted on sound business lines. We also believe that there is a reasonable prospect for the industry to develop sufficiently so as to dispense with protection or State assistance in course of time. For these reasons, we consider that the pickers industry satisfies the conditions of eligibility for protection.

Protection recommended.

19. In paragraph 17 we pointed out that a duty of 4 per cent. would be necessary to bring the price of the indigenous product on a par with that of the imported article. Normally this should be the level of the protective duty recommended. In the present instance, however, we consider that a somewhat higher margin of protection should be given. In our estimate of future costs, we have taken the cost of raw materials and labour on the basis of the 1947 figures. It is probable that the cost of these items will go up in the future to some extent. We, therefore, consider it necessary to make some allowance for possible fluctuations in the cost of production. Taking this into consideration, we recommend that the present revenue duty of 10 per cent *ad valorem*

should be converted into an equivalent protective duty. We also consider that a period of about three years will be required to stabilize the industry. We, therefore, recommend that the protective duty should remain in force up to 31st. March 1951. The protection recommended should be applicable to all types of pickers. If the total landed cost of the imported 4-B round foot picker goes below Rs. 156 per gross during the period of protection, action should be taken under Section 4(1) of the Indian Tariff Act of 1934 to raise the duty so as to make the landed cost of 4-B round foot pickers Rs. 156 per gross. Similar action should also be taken if the landed cost of imported jute pickers goes below Rs. 385 per gross.

Proposed changes in the import tariff schedule.

20. If our recommendation regarding the levy of protective duty is accepted, the import tariff schedule will have to be redrafted as follows :—

Item No.	Name of article	Nature of duty.	Standard rate of duty.	Preferential rate of duty if the article is the produce or manufacture of			Duration of protective rates of duty.
				U.K.	A British colony	Burma	
72(1)	The following textile machinery and apparatus by whatever power operated, namely, healds; heald cords and heald knitting needles; reeds and shuttles; warp and weft preparation machinery and looms; bobbins and pirns; dobbies; jacquard machines; jacquard harness linen cords; jacquard cards; punching plates for jacquard cards; warping mills; multiple box sleys; solid border sleys; tape sleys; swivel sleys; tape looms; wool carding machines; wool spinning machines; hosiery machinery; coir mat shearing machines; coir fibre willowing machines; dobby cards; lattices and lags for dobbies; wooden winders; silk looms; silk throwing and reeling machines; cotton yarn reeling machines; sizing machines; doubling machines; silk twisting machines; cone winding machines; piano card cutting machines; harness building frames; cards lacing frames; drawing and denting hooks;	Revenue	10% *ad valorem*.	..	..	Free	..

Item No.	Name of article	Nature of duty.	Standard rate of duty.	Preferential rate of duty if the article is the produce or manufacture of			Duration of protective rates of duty.
				U.K.	A British Colony	Burma	
	sewing thread balls making machines; cumbli finishing machinery; hank boilers; cotton carding and spinning machines; mail eyes; lingoes, comber boards and comber board frames; take-up motions, temples, picking bands; picking sticks; printing machines; roller cloth; clearer cloth; sizing flannel; and roller skins.						
72 (12)	Pickers used in the textile industries	Protective.	10% *ad valorem*	..	..	Free	Up to 31st March, 1951.

Burden of protection.

21. Since we have not recommended the imposition of any duty in addition to the existing revenue duty, the question of burden of protection does not arise in this case. We have, however, ascertained from the various consumers the cost of pickers in the manufacture of textiles. In the cotton textile industry, the cost of picker in the total cost of manufacture is about 0.125 per cent. In the case of jute textiles also the incidence is hardly appreciable. Consequently, the incidence of a 10 per cent. duty on the cost of manufacture of textile goods will be insignificant.

System of purchase.

22. In the course of our inquiries into the textile accessories such as wire healds and pickers, we have been impressed by the fact that there has not been sufficient direct contract between manufacturers of such accessories and the textile millowners. These articles are purchased through dealers and middlemen. We found at the public inquiry that while the consumers of these accessories viz., the mills and their associations complained that there was a shortage of pickers of good quality, the manufacturers stated that they were unable to find an adequate market. We also noted that the difference between the ex-factory prices of indigenous pickers and the prices at which the mills purchased them from the dealers was excessively high. The only solution to these difficulties is the establishment of direct contact between the picker manufacturers and the mills. We made this suggestion at the public inquiry and found ready acceptance of the proposal on the part of both the consumers and the manufacturers. Some of the mills, no doubt, do make direct purchases, but it is essential that all the mills

should try and place orders direct with the manufacturers of accessories themselves. In this matter the initiative should be taken by the textile mills and their associations since they are well established and are in a position to encourage the use of indigenous accessories. As far back as 1932, the Tariff Board in their Report on the Cotton Textile Industry emphasized that " unless the policy of protection results in the development not merely of the industries to which protection is granted, but also of subsidiary industries, it will have failed to achieve its full purpose ". The Board also observed that every effort should be made by millowners to encourage the use of Indian materials in their mills and that it was the obvious duty of millowners to provide a commensurate return to the country by utilizing indigenous materials and accessories, which should provide additional employment for Indian labour and capital. These observations are pertinent even today. We feel that direct relations and dealings between the manufacturers of indigenous accessories on the one hand and their consumers, viz., the textile industry on the other, would be the best means of encouraging the development of ancillary and subsidiary industries in this country while ensuring reasonable price and quality of the products. These are, after all, the objectives of a policy of protection, and it is desirable that they should be secured as far as possible through mutual co-operation between the producers and the consumers themselves. Failing this method, Governmental regulation of imports either through high tariff duties or quantitative restrictions and quotas may sometimes have to be resorted to. It is, therefore, in the interests of the industry, the dealers, the importers as well as the consumers, that direct relations such as we have suggested above grow up, and the mode of purchase is suitably modified.

Organization of small units.

23. Pickers have also been manufactured on a cottage industry basis at various centres in the Bombay Province and at Thanghad in Kathiawar (Saurashtra). This industry seems to us to be suitable for decentralization. Such development will be in line with the Government of India's recent statement on Industrial Policy which visualizes production of textile accessories on a cottage industry scale. It is essential, however, that such small units of production should be properly organised and that the quality of the output should be maintained on a uniform standard. Wherever there are such small units, the provincial governments concerned should take steps to organise these units by providing financial and technical aid and other facilities.

Other assistance asked for by the industry.

24. (a) *Machinery.*—The manufacturers have asked for facilities including foreign exchange, being made available to them for obtaining the necessary machinery from abroad. Power driven press is the most important machinery that is needed. It has not been possible for the manufacturers to import it from the United Kingdom. The manufacturers contend that this want of machinery reduces the efficiency of their factories by about 10 per cent as compared with the United Kingdom manufacturers. We understand, however, that a factory which has recently come into operation, namely, that of Messrs. Jay Hind Leather Industry, Kalol, has imported a power plant from the United Kingdom for manufacturing pickers and the factory has also got a special plant for manufacturing pickers for the jute industry. The industry as a whole, thus needs the installation of power

hydraulic presses. We recommend that the picker manufacturers should form an All India Association which should ascertain the requirement of machinery for the different units and then approach Government for the necessary facilities for obtaining it.

(b) *Facilities for import of raw hides from abroad.*—We have already stated that the manufacturers suggested that they should be given exchange facilities to import Chinese hides. While we appreciate the force of the contention that the Indian industry should be able to purchase its raw materials from the best available sources so as to compete on nearly equal terms with foreign manufacturers, and while it is true that British pickers industry imports foreign hides, we cannot see our way to make any recommendation for providing facilities to Indian manufacturers in this matter. An important consideration in granting protection to an industry in this country is the fact that it can utilise indigenous raw material which in this case is available in abundant quantity. It has also been found that pickers have been manufactured out of Indian hides by a number of firms up to the required quality and in many instances, up to the standard of the imported pickers. As we have already observed, if there is any cartel arrangement or governmental agreement which precludes Indian manufacturers from purchasing Batavian hides, they should obtain authentic information on the subject and represent their case to Government. But we do not see why the Indian Industry should not be able to make pickers of a satisfactory quality by making proper selection of Indian material and by adequate seasoning, treatment and workmanship. We cannot, therefore, recommend that any special facilities should be given to Indian industry to import Chinese hides.

(c) *Transport.*—The manufacturers complained about the high freight rates on raw hides as well as about the difficulty in obtaining necessary facilities for the transport of the raw material and the finished product. We were not in a position to investigate whether the present railway freight rate in respect of raw hides was excessive but if the manufacturers have any grievance on this score, we suggest that they should bring the matter to the notice of the Ministry of Transport. But much more important than the freight rate is the provision of adequate transport facilities. Since raw hides are a perishable commodity, they require quick transport. We recommend that the question of providing quick transport required by the pickers industry should be favourably considered.

Summary of conclusions and recommendations.

25. Our conclusions and recommendations are summarised as under :

(i) During the second World War the pickers industry in India expanded from a few struggling firms in 1939 to about 60 manufacturing firms and met the urgent requirements of the textile industry.

(Paragraph 5).

(ii) With the exception of sperm oil and panel pins, all the other raw materials required for the industry are available in the country.

(Paragraph 7(a)).

(iii) We recommend that the question of improving the quality of indigenous hides through better curing and other appropriate methods should receive the earnest consideration of the authorities concerned.

(Paragraph 7(b) (i)).

(iv) It is also recommended that if a trade agreement is negotiated between India and Pakistan, the requirements of India in respect of hides and skins should be borne in mind till such time as the Indian industry is in a position to obtain suitable hides within the country itself.

(Paragraph 7(b) (ii)).

(v) The industry should obtain authentic information whether there are any restrictions on the import of hides from Batavia owing to any agreement or understanding either between the Governments of the countries concerned or between the combines of exporters of hides and manufacturers of leather goods in those countries and represent their case to Government for necessary action.

(Paragraph 7(b) (iv)).

(vi) The possibility of supply of sperm oil from sources other than the U.K. and the U.S.A. should be investigated.

(Paragraph 7(c)).

(vii) The industry should pool its requirement for sodium sulphide and then collectively negotiate with the Imperial Chemical Industries with a view to obtaining an adequate quantity of this chemical. In case satisfactory arrangements are not arrived at, the industry should approach the Ministry of Industry & Supply for assistance in securing such supply.

(Paragraph 7(d)).

(viii) Glue is obtained as a by-product in the pickers industry and we recommend that picker manufacturers at each centre should combine and try to establish a glue manufacturing plant on an economic scale.

(Paragraph 9).

(ix) The estimated Indian demand for pickers during the next three years is 35,000 gross of pickers per annum, comprising 30,000 gross for cotton textile, 4,250 gross for jute and about 750 gross for silk and woollen industries.

(Paragraph 10).

(x) The rated capacity of the factories working at present is about 50,000 gross of pickers of all kinds. The actual production figures as submitted to the Board were only about 20,000 gross in 1945, 18,000 in 1946 and 13,000 gross in 1947.

(Paragraph 11).

(xi) The Indian manufacturers can and do produce pickers of standard quality but it is essential to evolve and maintain uniform standards for their products. We recommend

that the Indian Standards Institution should formulate specifications and standards which the manufacturers of pickers should comply with.

(Paragraph 12).

(xii) The bulk of imports of pickers into India has been coming from the United Kingdom although the Netherlands is also a source of supply.

(Paragraph 13).

(xiii) We recommend that the present revenue duty of 10 per cent *ad valorem* should be converted into an equivalent protective duty, which should remain in force up to 31st March 1951. If the total landed cost of 4-B round foot pickers goes below Rs. 156 per gross during the period of protection, action should be taken under Section 4(1) of the Indian Tariff Act of 1934 to raise the duty so as to make the landed cost of 4-B round foot pickers Rs. 156 per gross. Similar action should also be taken if the landed cost of imported jute pickers goes below Rs. 385 per gross.

(Paragraph 19).

(xiv) If our recommendation regarding the levy of protective duty is accepted, the necessary changes in the Indian Tariff Schedule would be as shown in paragraph 20.

(xv) The grant of protection to this industry will not impose any extra burden on the users of pickers.

(Paragraph 21).

(xvi) It is recommended that in the interests of the industry, direct relations and dealings between the manufacturers of indigenous pickers on the one hand and their consumers, viz., the textile industry, on the other, should be developed.

(Paragraph 22).

(xvii) We recommend that wherever there are small units of production, the Provincial Governments concerned should take steps to organise these units by providing financial and technical aid and other facilities.

(Paragraph 23).

(xviii) We recommend that picker manufacturers should form an All-India Association which should ascertain the requirement of machinery for the different units and then approach Government for the necessary facilities for obtaining it.

(Paragraph 24).

(xix) We recommend that the question of providing quick transport required by the pickers industry should be favourably considered.

(Paragraph 24(c)).

Acknowledgments.

26. The Board wishes to express its thanks to Mr. D. E. Cooper, Director, Machinery, Fuel and Stores Branch of the Office of the Textile Commissioner, Government of India, Mr. S. Raja, Superintendent, Government Tanning Institute, Bandra, Bombay and Mr. P. V. R. Rao, Cost Accounts Officer for their assistance and co-operation in connection with the inquiry.

G. L. MEHTA,
President.

H. L. DEY,
Member.

B. V. NARAYANASWAMY NAIDU,
Member.

M. AHMADULLAH,
Secretary.

BOMBAY,
Dated 5th June 1948.

APPENDIX I.

List of firms or bodies to whom the Board's questionnaires were issued and from whom replies were received. (*Vide Paragraph* 3).

In addition to all the Directors of Industries, Provincial Governments and Chambers of Commerce, relevant questionnaires were sent to the following producers, importers and consumers of pickers.

PRODUCERS :

(*Producers who have sent detailed replies to the questionnaire.
†Those who have filled up the rated capacity forms only.
‡Small scale producers and as such have not sent the detailed replies.
§Those who have stopped production and are not interested.)

Ahmedabad—

1. Ahmedabad Chrome Tanning Company
   Outside Jamalpur Gate,
   Ahmedabad.
2. Ahmedabad Pickers Works,
   New Vadaj, Sorabji Mistry's Place,
   Ahmedabad.
3. A. K. Parmar & Company,
   Narotam Building, Kapasia Bazar,
   Ahmedabad.

*4. Arun Industries Limited,
   Khokhra Mohamedabad,
   Ahmedabad.

5. Bharat Pickers Works,
   Amrawaidi Road,
   Ahmedabad.

*6. Chimanlal Amichand & Company,
   Khas Bazar,
   Ahmedabad.

*7. Chandabhai Bros. & Company,
   Post Box No. 34,
   Ahmedabad.

8. Chhagan Arjan Pickers Workshop,
   Near Memon Suleman Usman Pickers Workshop,
   Amraiwadi, Ahmedabad.
9. Darbar Pickers Works,
   C|o. Mr. Rathed Rupsing Rajabhai,
   New Vadaj, Sorabji Mistry's Place,
   Ahmedabad.
10. D. Mangaldas & Company,
    Darapur Hatas Chora,
    Ahmedabad.
11. Gujerat Pickers Works,
    Outside Gomatipur Gate,
    Behind Topi Mills Muse's Galli,
    Ahmedabad.
12. G. H. Parmar Pickers Works,
    New Vadaj, Post Sabarmati,
    Ahmedabad.
13. Gujerat Textile Products,
    1685, Near Dinkwa Chowky,
    Ahmedabad.

*14. Graduate Picker Works,
    P. B. No. 91, Dabgarwad,
    Ahmedabad.

*15. Hides and Leather Products, Ltd.,
Reid Road, Sherkotda Chowky,
Ahmedabad.

16. Hathila & Company,
Gheekanta Road,
Ahmedabad.

*17. H. Mansuri & Sons,
P.O. Box 84, Khodi Amli,
Ahmedabad.

*18. Indian Pickers Manufacturing Company,
Jamalpur Road, Khandai Sheri,
Ahmedabad.

19. Imperial Trades and Industries,
Raipur, Makariwad Bari,
Ahmedabad.

‡20. Jay Hind Leather Industries Ltd.,
Reid Road, Railwaypura P.O.,
Ahmedabad.

21. Makwana Pickers Works,
Outside Gomatipur Gate,
Ahmedabad.

22. Mohanlal Prabhudas & Company,
Reid Road,
Ahmedabad.

*23. Mansuri Picker Works,
P.B. No. 92, Khodi Amli,
Ahmedabad.

‡24. Modern Picker Supplies,
Post Box No. 96,
Ahmedabad.

*25. Pickers Limited,
Ellis Bridge,
Ahmedabad.

26. Patel & Parmar Picker Works,
Sorabji Mistry's Place,
Post Sabarmati Road,
Ahmedabad.

27. P. V. Parmar Picker Works,
Outside Gomatipur Gate, Mussis Chowki,
Ahmedabad.

Bombay—

28. Bharat Picker Works,
Dharavi, Bombay.

‡29. Bombay Picker Works,
Dharavi, Bombay 17.

30. G. Badat Rahimtolla & Company,
1st Floor, Sir Vithaldas Chambers,
Apollo St., Bombay.

31. Golden Pickers Manufacturing Co.,
125, Jakaria Masjid Street,
Bombay.

32. Hasambhai Pradhan,
148, Dabu Street,
Bombay 3.

33. Indian Pickers Manufacturing Co.,
Kala Kila, Dharavi Road,
Bombay.

§34. Irani and Company,
286-D, Irani House,
Supari Baug Road, Parel,
Bombay.

§35. K. R. Lakhani,
77, Medows Street, Fort,
Bombay.

36. Modern Pickers Works,
Sir Vithaldas Chambers,
Apollo Street,
Bombay.

‡37. Mohsin Picker Works,
132 Surti Moholla, 2 Tanks,
Bombay.

‡38. Noble Pickers Manufacturing Co.,
Kutewadi, Dharavi,
Bombay.

‡39. National Leather Industries,
105 Sir Vithaldas Chambers,
Apollo Street, Fort,
Bombay.

40. Original Hindustan Picker Works,
Dharavi, Bombay 17.

41. Textile Supplies Syndicate (India) Ltd.,
Kamani Bldg., Sir P. M. Road,
Bombay.

42. Textile Leather Works, Ltd.,
Lalgiri Chambers, Tamarind Lane,
Bombay.

*43. Textile Picker Works, (Regd.),
7, Deen Lane, Fort Bombay.

44. Universal Tanneries Ltd.,
Dharavi, Bombay 17.

45. United Picker Manufacturing Co.,
141, Sayee Bhuvan, Lohar Street,
Bombay.

*46. Western India Tanneries Limited,
Dharavi, Bombay.

Kathiawar—

‡47. Gulamhusen Chhagan,
Thangadh.

48. Jivanbhai Nagabhai,
Makwaba, Raipur.

49. Mulji Kanji,
Thangadh.

‡50. Mana Bhoja & Company,
Thangadh.

51. Parmar Pickers Works,
Chuda.

52. Ramniklal Odhavji Shah,
Joravernegari (Wadhwan State),
B. S. Railway.

‡53. Sun Pickers and Industrial Works,
Thangadh.

54. Vinod Kasha Picker Works,
Thangadh.

55. Vyas Brothers,
Thangadh.

Other Places—

56. Cottage Tanning Institute,
15, College Square,
Calcutta.

57. Habib & Company,
Station Road,
Godhra.

58. Hindustan Pickers Manufacturing Co., Ltd.,
Dhanesna Road, Kalol,
(North Gujrat).

†59. National Chamois Works, Ltd.,
6, Mangoe Lane,
Calcutta.

§60. Shafi Brothers & Company,
5-A, Gopal Chandra Road,
Calcutta.

ASSOCIATIONS.

*1. Ahmedabad Picker Manufacturers' Association,
Ellis Bridge, Ahmedabad.

2. All India Manufacturers' Organization,
Industrial Assurance Building,
Churchgate Street,
Bombay.

3. Association of Merchants & Manufacturers of
Textile Stores and Machinery,
Wadia Building, Dalal Street,
Bombay.

4. Bengal Tanners Association,
9, Clive Street,
Calcutta.

5. Dharavi Tanners, Hides & Skin Merchants' Association,
Dharavi, Bombay.

6. Engineering Association of India,
102-A, Clive Street,
Calcutta.

7. Federation of Woollen Manufacturers,
Post Box No. 93,
Cawnpore.

IMPORTERS.

(*Those who have replied to the questionnaire).

*1. Balmer Lawrie & Co., Ltd.,
103 Clive Street,
Calcutta.

*2. Bird and Company,
Chartered Bank Buildings,
P.B. No. 46,
Calcutta.

3. British Mills Stores Co.,
Sir Vithaldas Chambers, Bruce Street,
Bombay.

*4. B.N. Modi and Company,
14|35, Civil Lines,
Cawnpore.

*5. Consolidated Mill Supplies Ltd.,
Co-operative Insurance Building,
Sir P. M. Road, Bombay.

6. Don Watson & Co., Ltd.,
19, British India Street,
Calcutta.

*7. Gannon Dunkerley & Co., Ltd.,
Chartered Bank Buildings, Fort,
Bombay.

8. Greaves Cotton & Co., Ltd.,
1, Forbes Street,
Bombay.

9. H. M. Mehta & Co., Ltd.,
79|91, Apollo Street,
Bombay.

10. H. M. Patel & Co.,
105, Apollo Street, Fort,
Bombay.

11. Ivan Jones Ltd.,
Pollock House, 28A-Pollock Street,
Calcutta.

*12. J. Bracewell Ltd.,
103, Clive Street,
Calcutta.

*13. McGregor & Balfour Ltd.,
11, Clive Street,
Calcutta.

*14. McGavin & Company,
30 Strand Road,
Calcutta.

15. Morris Bates & Co.,
12, Dalhousie Square,
Calcutta.

*16. Nowrosjee Wadia & Sons Ltd.,
Neville House, Ballard Estate,
Bombay.

*17. Ormerods (India) Ltd.,
Bank of Baroda Building,
Apollo Street, Fort,
Bombay.

18. Overseas Mill Stores Co., Ltd.,
Richey Road, Shree Chaturbhuj Bhavan,
Ahmedabad.

19. P. M. Hutheesingh & Sons,
P. B. No. 74, Ghee Kanta Wadi,
Ahmedabad.

20. Popatlal Girdharlal & Co.
49|55, Apollo Street,
Bombay.

*21. Roberts McLean & Co., Ltd.,
101 Clive Street,
Calcutta.

*22. Simpson & Munro Ltd.,
4, Lyons Range,
Calcutta.

*23. Sizing Materials Co., Ltd.,
Jeroo Building, 137, Esplanade Road,
Bombay.

*24. Textile and General Supplies Ltd.,
2nd Floor, Savoy Chambers,
Wallace Street, Fort,
Bombay.

25. W. H. Brady & Co., Ltd.,
Royal Insurance Building,
Churchgate Street,
Bombay.

26. Williamson & Co. (Rochdale) Ltd.,
Patel House, Churchgate Street, Fort,
Bombay.

27. The Buffalo Picker Manufacturers' Association in the U.K.,
1, Booth Street, Manchester 2,
submitted a general memorandum, through the Leather Belting and Industrial Leathers Association, Calcutta.

(Messrs. Don Watson & Co., Ltd., Calcutta (No. 6), have not replied to the Board's questionnaire but have sent the samples of jute pickers).

CONSUMERS.

(*Those who have sent replies to the questionnaire).

*1. Ahmedabad Mfg. & Calico Printing Co., Ltd.,
P.O. Box No. 12,
Ahmedabad.

*2. Arvind Mills Ltd.,
Naroda Road,
Ahmedabad.

*3. Ahmedabad Advance Mills Ltd.,
Bombay House, Bruce Street,
Bombay.

4. Ahmad Silk Mills,
Ambarnath.

5. Ahmedabad Millowners' Association
Ahmedabad.

*6. Buckingham & Carnatic Co., Ltd.,
P. O. Box 66,
Madras.

7. Bipin Silk Mills,
Kasturchand Mills Compound, Dadar,
Bombay.

8. Bangalore Woollen, Cotton & Silk Mills Co. Ltd.,
Bangalore City.

*9. Central India Spg., Wvg., & Mfg., Co., Ltd.,
Bombay House, Bruce Street,
Bombay.

*10. Delhi Cloth & General Mills Co. Ltd.,
Najafgarh Road,
Delhi.

11. Dalhousie Jute Co., Ltd.,
Chartered Bank Buildings,
Calcutta.

12. Gagalbhai Jute Mills,
11, Clive Street, Calcutta.

*13. India United Mills Ltd.,
E. D. Sassoon Building, Ballard Estate,
Bombay.

*14. Indian Jute Mills Association, 2, Clive Street, Calcutta.

15. Jehangir Vakil Mills Ltd.,
Ahmedabad.

16. Khatau Makanji Spg. & Wvg. Co. Ltd.,
Laxmi Building, Ballard Estate,
Bombay.

17. Kohinoor Mills Ltd.,
C/o. Killick Nixon & Co., Home Street,
P. B. No. 100, Bombay.

18. Lawrence Jute Co., Ltd.,
Chartered Bank Bldg., Calcutta.

*19. Millowners' Association,
Elphinstone Bldg., Churchgate Street,
Fort, Bombay.

*20. Manhar Mills Ltd.,
Framji Petit Mills Premises,
Reay Road, Bombay 10.

21. Maharana Mills Ltd.,
Porbunder.

22. Mercury Mill Stores,
Fanibanda Bldg., Railwaypura,
Ahmedabad.

23. Nanikram Sobhraj Mills Ltd.,
Madhowlal Ranchhodas Colony,
Ahmedabad.

24. Raymond Woollen Mills Ltd.,
Thana, Bombay.

25. Sri Sayaji Mills Co., Ltd.,
Baroda.

*26. Swadeshi Cotton Mills Co. Ltd.,
P.O. Box 19, Cawnpore.

*27. Swadeshi Mills Co. Ltd.,
Bombay House, Bruce Street,
Bombay.

28. Shree Sakti Mills Ltd.,
Haines Road, Mahaluxmi,
Bombay.

29. Silk & Art Silk Mills Association, Ltd.,
Podar Chambers, Parsee Bazar Street,
Fort, Bombay.

*30. Tata Industries Limited,
Bombay House, Bruce Street,
Bombay.

*31. Tata Mills Ltd.,
Dadar Road, Parel,
Bombay.

*32. Western India Spg. & Wvg. Co., Ltd.,
Chinchpoekli, Kalachowki
Bombay.

*33. W. H. Brady & Co., Ltd.,
Royal Insurance Building,
Churchgate Street,
Bombay.

APPENDIX II.

List of persons who attended the public inquiry and were examined (vide paragraph 3).

I.—*PRODUCERS*:

1. Mr. D. C. Karaka	Representing	(*a*) Ahmedabad Picker Manufacturers' Association, Ahmedabad. (*b*) Pickers Ltd., Ahmedabad.
2. Mr. S. G. Desai & 3. Mr. E. A. Langrana	,,	Pickers Limited, Ahmedabad.
4. Mr. C. N. Patel	,,	Hides & Leather Products, Ltd., Ahmedabad.
5. Mr. B. C. Majumdar	,,	National Chamois Works, Ltd., Calcutta.
6. Mr. A. S. Authan	,,	National Leather Industries, Bombay.
7. Mr. S. P. Pandit	,,	Dharavi Tanners', Hides & Skin Merchants Association, Bombay.
8. Mr. M. N. Mashruwalla	,,	Mana Bhoja & Co., Thangadh.
9. Mr. N. P. Pandit	,,	Arun Industries, Ltd., Ahmedabad.
10. Mr. C. N. Pothiwala	,,	Jay Hind Leather Industries, Ltd. Ahmedabad.
11. Mr. S. H. Bhagwati & 12. Mr. R. B. Desai	,,	Association of Merchants and Manufacturers of Textile Stores and Machinery, Bombay.
13. Mr. R. K. Chickerur	,,	Textile Leather Works, Ltd., Bombay.
14. Mr. H. U. Khan	,,	Bombay Picker Works, Bombay.
15. Mr. G. H. Parmar	,,	Patel and Parmar Picker Works, Ahmedabad

II.—*IMPORTERS*:

1. Mr. Haworth & 2. Mr. Tutton	,,	(*a*) Leather Belting & Industrial Leather Association, Calcutta. (*b*) Simpson & Munro Ltd., Calcutta. (*c*) McGavin & Co., Calcutta, and (*d*) Textile & General Supplies Ltd., Bombay.
3. Mr. T. Scroggie	,,	(*a*) Bird & Co., Calcutta. (*b*) Indian Jute Mills' Association, Calcutta.
4. Mr. R. A. Cole	,,	(*a*) McGregor & Balfour, Ltd., Calcutta. (*b*) Roberts McLean & Co., Ltd., Calcutta. (*c*) Bird & Co., Calcutta. (*d*) Indian Jute Mills' Association, Calcutta.
5. Mr. N. J. Ruwalla	,,	Nowrosjee Wadia & Sons, Ltd., Bombay.
6. Mr. F. W. Bayley and 7. Lt. Col. B. A. Rankilor	,,	Gannon Dunkerley & Co., Ltd., Bombay.
8. Mr. M. A. Bharucha	,,	Ormerods (India) Ltd., Bombay.
9. Mr. M. J. Shah	,,	Overseas Mills Stores Co., Ltd., Ahmedabad.
10. Mr. Allen	,,	Sizing Materials Co., Ltd., Bombay.
11. Mr. Butterworth	,,	G. Towler & Sons, Ltd., Bradford, England.

III.—*CONSUMERS*:

1. Mr. G. Saldhana	,,	India United Mills Ltd., Bombay.
2. Mr. C. N. Shah	,,	Manhar Mills Ltd., Bombay.
3. Mr. H. R. Batliwala	,,	Tata Industries Ltd., Bombay.

IV.—*OFFICIALS*:

1. Mr. D. E. Cooper	,,	The Textile Commissioner, Bombay.
2. Mr. S. Raja	,,	Superintendent, Govt. Tanning Institute Bandra, Bombay.

APPENDIX III(a).

List of Manufacturers with their location, date of commencement of production and rated capacity (vide paragraph 5).

Ahmedabad.

Name of the factory.	Location.	Date of Commencement of production	Annual production capacity as declared by the factory (in gross)
1. Pickers Limited	Nawda Back Road ..	1928	5,000*
2. Chandabhai Brothers & Co. ..	Dabgarwad, Dariapur	1914	5,000
3. India Pickers Manufacturing Co. ..	Jamalpur Gate ..	1930	2,000 to 2,500
4. Hides & Leather Products Ltd. ..	Railwaypura Post ..	1914	2,000* (with power plant to be installed).
5. Arun Industries Limited ..	Khokhra Mehmedabad	1944	Not given.
6. H. Mansuri & Sons	Dariapur, Dabgarwad	1914	2,500
7. Mansuri Picker Works	Dariapur, Dabgarwad	1914	2,000
8. Graduate Picker Works	Dariapur, Dabgarwad	1914	2,000
9. Ahmedabad Chrome Tanning Company.	Pir Mohmed Shah Road, Ghee Kanta.	1928	1,100 to 1,200*
10. S. A. Parmar & Co.	Amaraiwadi ..	Not given	2,400
11. Chimanlal Amichand & Company ..	3 Gates, Khas Bazar	1914	1,800*
12. Mohandas Prabhudas & Company	Reid Road	1930	1,000*
13. Makwana Picker Works	Gomtipur Darwaja ..	Not given	Not given.
14. P. V. Parmar Picker Works ..	Outside Gomtipur Darwaja.	1940	1,000
†15. Jay Hind Leather Industries Ltd.	Kalol	Not yet started.	11,200
			39,000 to 39,600

*Information supplied by the Ahmedabad Picker Manufacturers' Association.

†The firm has given the capacity of the factory as 200 tons per annum. Assuming that the firm is manufacturing only 4B-round foot pickers, the capacity works to 11,200 gross (40 lbs = 1 gross) ; theirs is a complete power plant unlike the other pickers manufacturing plants in India.

(B) *Bombay.*

Name of the factory. 1	Location. 2	Date of commencement of production. 3	Annual production capacity as declared by the factory (in gross). 4
1. National Leather Industries ..	255 Dharavi Main Rd., Ratansi Jethabhai Bldg., Dharavi.	1944	Optimum production about 3,000 gross. Normal production is 2,000 gross.
2. Western India Tanneries Ltd. ..	Dharavi	1942	300
3. The Textile Leather Works ..	Poonawala Chawl, Dharavi.	1937 (Pickers Manufactured in 1946)	1,200
		Total	3,500 to 4,500

(D) *Thangadh.**

1	2	3	4
1. National Chamois Works Limited 33/1, North Topsia Road, P.O. Teljala, 24 Parganas.	Tengra, Calcutta ..	March 1946	2,400 (Jute)
		Total	2,400

(D) *Thangadh.**

1	2	3	4
†1. Sun Picker & Industrial Works ..	Near Station ..	March 1943	1,200
2. Mana Bhoja & Co.	..	..	700
†3. Amba Mana	..	..	700
4. Gulam Hussein Chhagan ..	..	..	700
5. Megha Pala	..	..	700
6. Kersan Megha	..	..	400
	Total	..	4,400
	GRAND TOTAL	..	49,300 to 50,900

* Information supplied by Sun Picker & Industrial Works *vide* their letter dated 12th December '47).

† Ceased production.

APPENDIX III(b)

List of Manufacturers with their actual output of the different types of pickers for the last three years.

(Vide paragraph 11)

Name of the Factory.	Actual Output for the last three years (in gross)												Total		
	4-B round foot.			Drop box			Jute			Other kinds					
	1945	1946	1947	1945	1946	1947	1945	1946	1947	1945	1946	1947	1945	1946	1947
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Pickers Ltd., Ahmedabad ..	4900	4259	3203	..	118	67	..	45	73	60*	..	..	5500	4422	3343
2. Chandabhai Bros. & Co., Ahmedabad	3200	..	..	60	..	..	..	..	..	..	..	..	3260	..	..
3. India Pickers Mfg. Co., Ahmedabad	1963	2313	1095	..	97	68	..	..	..	62	..	..	2025	2410	1163
4. Hides & Leather Products Ltd., Ahmedabad.	1099	1607	1800	..	..	..	..	..	..	..	..	..	1099	1607	1800
5. Arun Industries Ltd., Ahmedabad	1086	1535	1068	..	..	..	..	..	4	..	31	..	1086	1566	1072
6. Chimanlal Amichand & Co., Ahmedabad.	834	525	494	26	7	13	½	19	77	24	14	24	884½	565	608
7. National Leather Industries, Bombay.	1800	..	..	..	..	..	..	..	..	..	..	..	1800	..	..
8. National Chamois Works, Ltd., Calcutta.	..	..	..	..	..	..	..	250	1235	..	..	..	..	250	1235
9. Mana Bhoja & Co., Thangadh ..	..	..	..	..	..	..	..	..	333	..	..	..	..	..	333
†10. Megha Pala, Thangadh	..	..	300	..	..	..	..	..	..	..	..	..	..	..	300
†11. Kersan Megha, Thangadh ..	..	..	200	..	..	..	..	..	..	..	..	..	..	..	200

Factories which have given only their total annual production of all types of pickers.															
1. H. Mansuri & Sons, Ahmedabad ..	1362	..	..	..	..	..	..	..	..	49	..	..	1411	975	1000
2. Mansuri Picker Works, Ahmedabad	1292	..	..	..	..	..	..	..	..	53	..	..	1345	971	1065
3. Graduate Picker Works, Ahmedabad	1277	..	..	..	..	..	..	..	..	53	..	..	1330	1038	1062
‡4. Ahmedabad Chrome Tanning Co., Ahmedabad.	..	..	..	..	..	..	..	..	..	..	..	..	..	787	..
‡5. S. A. Parmar & Co., Ahmedabad ..	..	..	..	..	..	..	..	..	..	..	..	..	..	590	..
‡6. Mohanlal Prabhudas & Co., Ahmedabad.	..	..	..	..	..	..	..	..	..	..	..	..	..	498	..
‡7. Makwana Picker Works, Ahmedabad	..	..	..	..	..	..	..	..	..	..	..	..	..	474	..
‡8. P. V. Parmar Picker Works, Ahmedabad.	..	..	..	..	..	..	..	..	..	..	..	..	..	406	..
‡9. Patel & Parmar Works, Ahmedabad	..	..	..	..	..	..	..	..	..	..	..	..	..	1142	..
10. Western India Tanneries Ltd., Bombay.	..	..	..	..	..	..	..	..	..	..	..	..	230	156	88
Total ..	18813	10239	8160	86	222	148	½	314	1722	301	45	24	19970½	17857	13269

* Including Jute.
† Information supplied by M/s. Sun Picker & Industrial Works, Thangadh.
‡ Information supplied by the Ahmedabad Picker Manufacturers' Association.

APPENDIX IV

Statement showing the quantity and value of imports of pickers into British India by sea from the principal countries of consignment since 1937-38 (vide paragraph 13).

	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46	1946-47	1947-48
I. (a) *Quantity of Imports in Cwts. from:*											4 months only ending July 1947).
U.K.	55,120	4,290	7,308	5,067	2,995	2,181	2,946	Information not available.		3,731	1,584
Netherlands ..	594	388	375	91	..	..	..	Do.		34	68
Other Countries	151	105	97	134	45	..	..	Do.		..	..
Total quantity of imports ..	5,865	4,783	7,780	5,292	3,040	2,181	2,946	1,847	2,761	3,765	1,652
(b) *Quantity of Imports in *Gross* Tons:											
U.K.	14,338	12,012	20,462	14,188	8,386	6,107	8,249	Information not available.		10,447	4,435
Netherlands ..	1,661	1,086	1,050	255	..	..	..	Do.		95	191
Other Countries	423	294	272	375	126	..	..	Do.		..	..
Total ..	16,422	13,392	21,784	14,818	8,512	6,107	8,249	5,173	7,731	10,542	4,626
II. *Value of Imports in Rupees from* :											
U.K.	762,808	6,16,726	11,11,531	8,92,714	5,48,423	5,80,818	9,84,356	Information not available.		15,41,688	6,77,150
Netherlands ..	84,447	57,755	62,614	14,921	..	..	..	Do.		14,489	29,473
Other Countries	22,116	19,235	21,543	44,340	14,812	..	..	Do.		..	..
Total value of imports	8,69,365	6,93,716	11,95,688	9,51,975	5,63,235	5,80,818	9,84,356	7,35,064	11,30,631	15,56,177	7,06,623

Source of information : Annual Statement of Sea-borne Trade Accounts.
* Conversion ratio 40 lbs. 1 gross.

APPENDIX V

(i) *C.I.F. prices and landed costs—Cotton textile pickers (value per gross)*

(Vide paragraph 15)

Source of information.	Date of import	Country of origin	Type of picker	C.I.F. price	Customs duty (10%)	Landing & clearing charges.	Landed cost	Selling price	Remarks.
				Rs. As. Ps.	Rs. As. Ps.	Rs. As. Ps.	Rs. As. Ps.	Rs. As. Ps.	
1. J. Bracewell Ltd. Bombay	Current. Firm's letter dated 13-3-48.	U.K.	4-B round foot	185 1 0	18 8 1	4 15 3	208 8 4	..	
2. Nowrosjee Wadia & Sons Ltd., Bombay.	Principal's letter dated 23-2-48.	U.K.	4-B round foot	223 1 9	22 5 0	0 9 10 (1%)	246 0 7	..	
			Drop box ..	455 7 6	45 8 9	1 4 0 (1%)	502 4 3	..	
3. Williamsons (India) Ltd., Bombay.	March 1948 ..	U.K.	4-B round foot	168 4 8	16 13 3	0 13 6 (1%)	185 15 5	223 2 0	
4. B. N. Mody & Co., Kanpore.	1. 12-1-48 received at Bombay.	U.K.	4-B round foot	153 13 11	15 6 2	1 8 8	170 12 9	..	(b) In addition, the firm has taken into account (i) interest at Rs. 1-4-5 per gross and (ii) railway freight to Kanpur at Rs. 2-0-10 per gross making the landed cost @ Kanpur Rs. 201 8-2.
	2. 17-3-48 received at Kanpore.	U.K.	4-B round foot	177 9 6	17 12 2	2 13 3	198 2 11 (b)	..	
5. Consolidated Mill Supplies Ltd. Bombay.	January 1948 ..	U.K.	4-B round foot	165 11 9	16 9 2	4 2 3	186 7 2	223 12 0	The firm has given the landed cost as Rs. 186-12-0.
6. W. H. Brady & Co., Bombay	Firm's letter dated 12-3-48.	U.K.	Do.	141 2 4	14 1 10	1 1 5 (0·77%)	156 5 7	..	The firm has given the landed cost as Rs. 158-13-0.

Source of information.	Date of import.	Country of origin	Type of picker.	C.I.F. price.	Customs duty (10%)	Landing & clearing charges.	Landed cost	Selling price	Remarks.
				Rs. As. Ps.	Rs. As. Ps.	Rs. As. Ps.	Rs. As. Ps.	Rs. As. Ps.	
7. Overseas Mill Stores Co. Ltd., Ahmedabad.	February 1948 ..	U.K.	4-B round foot	144 11 2 (1)	14 7 6	1 7 2 (1%)	160 9 10	..	The firm has given landed cost for (1) as Rs. 163-0-0.
				151 14 11 (2)	15 3 1	1 8 4 (1%)	168 10 4	..	(2) as Rs. 172-0-0.
8. Ormerods (India) Ltd., Bombay.	5th April 48 ..	..	4-B round foot	160 7 4	16 0 9	1 12 0	178 4 1	222 0 0	The firm has given the duty as Rs. 16-12-0 and the total landed cost as Rs. 185-12-0
9. Collector of Customs, Bombay.	Imports of last two months (his letter dated 20-3-48).	U.K.	4-B round foot	160 0 0	16 0 0	..	..	..	
10. Collector of Customs, Calcutta.	Date of invoice 18-3-48.	U.K.	4-B round foot Super quality limed Genuine Batavia Buffalo.	172 2 11	17 3 7	..	..	..	
11. Collector of Customs, Madras.	Letter dated 12-4-48.	U.K.	4-B round foot	192 1 4	19 3 4	..	..	..	

(ii) *C.I.F. prices and landed costs—Jute pickers (value per gross).*

Source of information.	Date of import.	Country of origin.	C.I.F. price.	Customs duty(10%)	Landing and Clearing charges.	Landed cost	Selling price.	Remarks.
			Rs. As. Ps.	Rs. As. Ps.	Rs. As. Ps.	Rs. As. Ps.	Rs. As. Ps.	
1. Don Watson & Co. Ltd., Calcutta	Date of invoice London 10-12-47.	U.K. ..	392 12 0	39 4 5	3 11 5	435 11 10	..	
2. Simpson & Munro Ltd., Calcutta	Latest: Firm's letter dated 18-3-48.	U.K. ..	344 9 7	34 7 4	17 3 8 (5%)	396 4 7	510 0 0	
3. Roberts McLean & Co., Ltd., Calcutta.	Current; Firms letter dated 17-3-48.	U.K. ..	335 9 4	33 8 11	16 12 6 (5%)	385 14 9	510 0 0	The firm has given landed cost as Rs. 65-6-0 per dozen pairs or Rs.392-4-0 per gross.
4. McGavin & Co., Calcutta ..	New Consignments Firm's letter dated 24-3-48.	U.K. ..	348 9 8	34 13 9	10 7 4 (3%)	393 14 9	..	The firm has shown the landed cost Rs.66-11-3 per dozen pairs, which works out to Rs.400-3-6 per gross
5. Dalhousie Jute Co. Ltd., Calcutta.	Latest Firm's letter dated 24-3-48	U.K. ..	455 0 8	45 8 1	..	..	..	
6. Collector of Customs Calcutta	Date of invoice 29-1-48.	U.K. ..	392 10 3	39 4 3	..	..	..	
7. Collector of Customs, Bombay.	His letter dated 20-3-48.	U.K. ..	384 0 0	38 6 5	..	..	..	

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GOVERNMENT OF INDIA

MINISTRY OF COMMERCE

REPORT OF THE INDIAN TARIFF BOARD ON THE CONTINUANCE OF PROTECTION TO THE SILVER THREAD AND WIRE INDUSTRY

BOMBAY

1948

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REPORT ON THE SILVER THREAD AND WIRE INDUSTRY

Reference to the Board.

The Government of India, Ministry of Commerce in their Resolution No. 134-T(19)|47, dated 10th April 1948, read with paragraph 2 of the Resolution of the late Department of Commerce, No. 28-T(6)|46, dated 20th January 1947 (*vide* Appendix I), requested the Tariff Board to examine in detail the protection enjoyed, among others, by the silver thread and wire industry and to report to Government what protective measures, if any, should be continued after 31st March 1949.

Scope of the inquiry.

2. The scope of the present inquiry is limited to ' silver thread and wire (including so-called gold thread and wire mainly made of silver) and silver leaf, including also imitation gold and silver thread and wire, lametta, and metallic spangles and articles of a like nature, of whatever metal made ' (*vide* item No. 61(5) of the Indian Customs Tariff Schedule, Twentyeighth Issue) and ' fabrics containing gold or silver thread ' (*vide* item No. 48(10) of the Indian Customs Tariff Schedule, Twentyeighth Issue). Originally, fabrics containing gold and silver thread were not protected. As these fabrics generally contained a fairly large quantity of gold and silver thread, it was decided in 1934 to extend the protective duty given under item No. 61(5) to such fabrics also.

Method of inquiry.

3. Besides the standard questionnaire the Board issued a detailed questionnaire (Appendix II) on 21st April 1948 to all known producers, Provincial Directors of Industries, Chambers of Commerce and Trade Associations. A list of those to whom the questionnaires were issued and who submitted their replies is given in Appendix III. The Board deputed its Cost Accounts Officer, Mr. P. V. R. Rao, to investigate the cost of production of the various types of silver thread, wire, etc., manufactured at Surat. Mr. Rao visited Surat on 2nd June and again on 11th June 1948. On 12th June 1948, the President and Members, accompanied by the Secretary, and Assistant Secretary, visited Surat and inspected a number of different types of factories (see Appendix IV) engaged in the manufacture of silver thread and allied products. The Board also held preliminary discussions at Surat on 13th June 1948 with the representatives of the Surat Chamber of Commerce, the Jari Merchants' Association and certain other groups interested in this industry. A public inquiry was held at Bombay on 23rd June 1948. Appendix V contains the list of persons who were invited for giving evidence at the public inquiry. The Board also examined the President of the Surat Jari Kamdar Mandal on 7th July 1948.

History of the industry.

4. (a) *Early development.*—This industry which appears to have had its origin in India developed a great deal under the patronage of the Moghul Emperors. During the Moghul period, Indian silver thread products were exported to Italy, Germany and France. Before long, France also produced a similar

article. During the 19th century, the industry was developed considerably in that country with the help of power machinery. And early in the present century she started exporting large quantities to India, offering severe competition to our silver thread in the home market. Consequently, the condition of the Indian industry began to be precarious and the industry would have become almost extinct but for World War I which caused a cessation of imports and thereby gave a stimulus to home production. Immediately after the close of the war, however, France once again started exporting freely to India thereby seriously threatening the Indian industry. In 1922 Government, however, raised the import duty on silver thread and allied products to 30 per cent. *ad valorem* which helped the industry to withstand foreign competition. About this time, the Government of Bombay also took steps to assist the industry. Its Department of Industries imported a few machines and awarded two special travelling scholarships to Messrs. B. J. G. Shastri and J. K. Chapadia to study the technique of manufacture in Europe. Their report was published in 1923, and important improvements were made in the industry at Surat on the basis of their recommendations.

(b) *Tariff inquiry.*—By the Finance Act of 1930, Government decided to impose on silver bullion a duty of Re. 0-4-0 per ounce. This partially took away the advantage of the 30 per cent. import duty which the industry was then enjoying. As a result of the discussion in the Central Legislature, however, it was decided to raise the duty on silver thread and allied products to 38 per cent. in order to compensate the manufacturers of silver thread for the incidence of the new duty on silver. This duty was to last until 31st March 1931 and Government assured the Legislature that the question of granting protection to silver thread manufacurers would be referred to the Tariff Board. In accordance with this undertaking, a Tariff Board was constituted to inquire into the question of granting protection to the manufacture in India of all articles included in item No. 43 BBB of the then Statutory Tariff as amended by the Finance Act of 1930. The items included were silver plate, silver thread and wire (including the so-called gold thread and wire mainly made of silver), silver leaf and other silver manufactures. The Board in its Report, dated 8th October 1930 recommended that a duty of 50 per cent. *ad valorem* should be levied for a period of 10 years on silver thread and wire including the so-called gold thread and wire mainly made of silver, silver leaf, imitation gold and silver wire and thread, lametta and articles of like nature. The Government of India accepted this recommendation. The Board made no recommendation in regard to 'silver plate and silver manufactures of all sorts not otherwise specified', as no request for the protection of those items had been received from the industry concerned.

This was the first Industry on a cottage industry basis which was the subject of investigation by a Tariff Board. Though it was a cottage industry, the aggregate production of all the units was considerable. The Tariff Board of 1930 estimated that the value of the silver thread manufactured in India in a single year would be about Rs. 100 lakhs and the number of workers employed in it about 10,000. During 1922-30, when the revenue duty was raised to 30 per cent., the Indian industry developed

considerably and it captured almost the whole of the North Indian market. In fact, so far as the North Indian market was concerned, the industry did not require any further assistance. Therefore, the whole purpose of protection to the industry in 1930 was to enable it to capture the South Indian market as well and accordingly the measure of protection was recommended. The silver thread that was used in the Madras Province was mainly for fine handloom cloth which was sold at high prices. The handloom weaver in the Province did not find the Indian made silver thread suitable for his requirements, because the imported article was of a better and more uniform quality. The Board, while recommending protection, hoped that under the stimulus of a higher duty and with the assistance of the Provincial Departments of Industries, the industry would take necessary steps to improve its technique and attain a higher standard and a greater degree of uniformity in the manufacture of silver thread.

(c) *Progress since* 1924-25.—The following statement gives the figures of average production, number of people employed, number of factories and the capital invested in 1924-25 and 1945.

	1924-25*.	Present (1945).	
		Fine gold thread.	Other silver and gold thread.
	Rs.	Rs.	Rs.
Average production ..	20,00,000	3,00,00,000	70,00,000
		Other allied products :	
		2,30,00,000	
		Real	Imitation.
Hands employed	2,000	20,000	10,000
		plus 1,500 part-time women workers.	*plus* 1,500 part-time women workers.
Number of factories ..	60	1,000	500
Capital	10,00,000		3,00,00,000
		Cost of machinery	1,00,00,000
		Working capital ..	2,00,00,000

*N.B.—These figures refer only to the finer classes of Indian gold-thread which are in direct competition with imported thread for weaving purposes and do not refer to the coarser classes used for embroidery and other forms of ornamentation. If all classes of gold-thread and wire are included, these figures would be approximately double (*vide* Report of the Cottage and Small Scale Industries Sub-Committee of the Provincial Industries Committee, Bombay).

The Surat Chamber of Commerce have informed us that there has been no appreciable change in the position of the industry since 1945. Apart from the increase in production and in the number of artisans employed, considerable progress has also been made on the engineering side of the industry, and practically all machinery and accessories including such valuable implements as ruby dies are now manufactured in Surat. In Banares also a firm under the name of 'Wire Industries, Banares Ltd.' has started the manufacture of dies. As a result of protection, the industry was able to capture a large part of the South Indian market also by 1939, and with the virtual cessation of imports during and after the war, the whole of the Indian market is now in the hands of the Indian manufacturers. Besides, the industry has developed an export market. The Industry Sub-Committee of the Bombay Provincial Industries Committee has estimated the prewar export at 33 per cent. of the total production at Surat. Another development which has taken place since the last Tariff Board reported is the manufacture of half fine and imitation gold thread. This was developed mostly during the war when there were no imports. By the end of the Second World War the industry was able to get itself firmly established in the country.

(d) *Present position of the industry.*—The main centres of production are Surat and Banares. There are also a few factories at Delhi, Jullundur, Ajmer and Bangalore. In Surat, the annual production of real silver thread is valued at Rs. 3 crores and that of other silver and gold thread at Rs. 70 lakhs. The value of allied products is estimated at Rs. 2.30 lakhs. Thus, the total production of silver thread and allied products comes to Rs. 6 crores in Surat alone ; and about 30,000 full-time men workers and 3,000 part-time women workers are employed in the industry there. In Banares, the second important centre, there are about 3,000 machines working, turning out 60,000 tolas of fine silver thread a day ; no imitation or half-fine thread is produced there. Taking 240 working days in a year and the value of silver thread at Rs. 2 per tola, the estimated value of the yearly production will be about Rs. 3 crores. That is to say, the value of total production in Surat and Banares combined will be about Rs. 9 crores. As for other centres, detailed information is not available. If we estimate the worth of production at the other centres at Rs. 1 crore, the total Indian production will be worth about Rs. 10 crores of silver thread and allied products. The number of workers employed in the U.P. is about 10,000 while at the other centres they may be about 3,000. The total number of people employed in this industry will thus be 40,000 to 45,000. And the total capital employed in Surat and Banares will come to about Rs. 3½ crores. Thus, although the industry is organised on a small scale, from the point of view of the capital invested, the number of persons employed and the total production, it has attained a considerable magnitude.

Different kinds of silver thread, wire and lametta.

5. Among the large variety of silver thread and wire, etc., manufactured in India, the following constitute the principal types :—

Type.	*Full description of type.*
1. Thread Real Gold.	Silver wire with gold gilt flattened and wound on silk thread.
2. Thread Real Silver.	Silver wire flattened and wound on silk thread.
3. Thread Half Fine Imitation Gold.	Copper wire with gold gilt flattened and wound on cotton yarn of fine count.
4. Thread Half Fine Imitation Silver.	Copper wire with silver gilt flattened and wound on cotton yarn of fine count.
5. Thread Imitation Gold.	Copper wire with brass gilt flattened and wound on cotton yarn of a coarse count.
6. Thread Imitation Silver.	Copper wire with silver gilt flattened and wound on cotton yarn of a coarse count.
7. Lametta Real Gold.	Silver wire with gold gilt flattened.
8. Lametta Real Golden.	Silver wire with brass gilt flattened.
9. Lametta Real Silver.	Silver wire flattened.
10. Lametta Imitation Gold.	Copper wire with brass gilt flattened.
11. Lametta Imitation Silver.	Copper wire with silver gilt flattened.
12. Wire Real Silver.	Silver wire.
13. Wire Imitation Gold.	Copper wire with brass gilt.
14. Wire Imitation Silver.	Copper wire with silver gilt.
15. Spangles Imitation Silver.	Copper wire annealed and flattened and then die-punched.
16. Spangles Real Silver.	Real silver wire annealed and flattened and then die-punched.

Silver thread and gold thread are manufactured in different lengths, the fineness varying from 1,200 yards to 2,500 yards per ounce. The material is sold in the form of skeins.

Silver or gold thread is sold in packets called ' mares '. Each mare contains eight skeins, and as each skein weighs one ounce, each mare weighs 8 ounces or 21 tolas.

There are at present six main classes of gold and silver thread manufactured in India, the difference between them depending upon the metal and the yarn used. Besides, as will be seen from the above list, varieties of lametta and different types of wires, spangles, spirals and discs are also manufactured in this country.

6. Silver and gold thread is used in weaving, brocade work, embroidery and laces, caps, turbans, dhoties, angavastrams, neckwares, sarees and blouse pieces.

Uses of the product.

Real silver and gold thread is used in the manufacture of costly silk fabrics, while the cheaper qualities of thread are used in the manufacture of cotton fabrics.

7. The quality of the indigenous product has improved considerably since the previous Tariff Board reported in 1930. As there are no imports at present, it is not possible to say exactly how the indigenous article will compare with the imported article. The consensus of opinion, however, is that the quality of the indigenous product is as good as that of the imported article.

Quality.

8. The basic raw materials of the industry are gold, silver, copper wire and silk and cotton of very fine count.

Raw materials.

Other raw materials and stores required are cyanides, soft salts, brass salts, zinc oxide, potassium oxide, acids, colours and dyes, soft soap, wax, crucibles, ruby and diamond dies.

(a) *Bullion.*—The manufacturers buy gold and silver bullion either locally or from the market at the prevailing market rates. The Surat Chamber of Commerce stated that the total quantity of gold used for the industry in India was 45,000 tolas per annum and that of silver was 6,000 bars of 2,800 tolas each. The Chamber also referred to the observation of the last Tariff Board to the effect that the precious metals were available to all countries at about the same price and went on to point out that this observation was no longer true of present-day conditions, because there was disparity in the prices at which gold and silver were made available to industry in different countries. In support of this contention, the Chamber stated that, while the ruling prices of gold and silver (*i.e.*, at the time of the public inquiry) were in the neighbourhood of Rs. 115 per tola of gold and Rs. 169 per 100 tolas of silver, the corresponding prices at which they were made available for industrial uses in France were about Rs. 90 per tola of gold and Rs. 75 per 100 tolas of silver. In order to remove this alleged disparity in the prices of gold and silver in France and India, the Chamber suggested that the Reserve Bank should be required to supply the gold thread manufacturers with gold and silver at favourable rates. The Chamber, however, could not substantiate the statement regarding the disparity of the prices of silver and gold in the two countries, nor could the Board obtain any reliable information regarding the prices at which gold and silver were supplied for industrial uses in France.

(b) *Copper wire.*—Copper wire also forms an important raw material in the manufacture of imitation gold thread. At present, manufacturers of imitation thread get 10 S.W.G. wire from the National Insulated Cable Co., Ltd., Calcutta, and the Indian Cable Co., of India Ltd., Calcutta, and then draw finer wires according to their requirements. The Surat Chamber of Commerce, however, pointed out that the supply of wire from these sources was neither sufficient nor constant with the result that the industry suffered from shortage of this material. To remedy this, the Chamber suggested that the manufacturers should be allowed to establish on a co-operative basis in Surat a company for the drawing

of copper wire from black copper rods which they expected to obtain from the National Rolling Mills at Calcutta. We were, however, informed by the National Insulated Cable Co., of India Ltd., Calcutta, that it had sufficient capacity to supply in full the requirement of copper wire for the gold thread industry. As the Surat Chamber of Commerce had not drawn up any definite scheme for the manufacture of copper wire, we are not in a position to say whether such a unit as the Surat Chamber of Commerce proposed to put up would be an economic one. Therefore, we make no recommendations on this matter.

(c) *Silk and cotton yarn.*—Silk yarn and cotton yarn are the other basic raw materials. Formerly, silk yarn used to be imported from France, Switzerland, Germany, Japan and China. The Surat manufacturers also used to obtain silk in hanks from Kashmir and get it dyed at Surat. They, however, told the Board that Japanese and Chinese silk yarns were the proper material for the gold thread industry but that these were not easily available now. The cotton yarn required is of 50s counts and over, and the total quantity consumed is about 10,00,000 lbs.

(d) *Other materials and stores.*—We are given to understand that other materials and stores are available in the country.

Process of manufacture.

9. (a) The processes involved in the manufacture of silver thread are : (i) preparation of silver bar ; (ii) drawing of silver wire coarse medium, fine and superfine ; (iii) gilding ; (iv) flattening the wire (lametta) ; (v) dyeing of raw silk ; (vi) winding of lametta on silk thread ; (vii) winding of silver thread on bobbins ; (viii) reeling ; and (ix) packing. Some of these processes are of a highly specialised character and can only be done by skilled operatives.

(i) *Wire drawing.*—In the preparation of wire, silver is first melted and then cast into ingot, round or oblong. The ingots are then rolled into bars of certain thickness and then drawn through dies. When the basic metal used is copper, the usual practice at Surat is to get S.W.G. 10 wire from the cable companies and then draw it to finer gauges.

(ii) *Metal thread manufacture.*—After the wire is drawn fine, it is flattened into lametta. The old method of flattening wire consisted in placing a number of wires on a polished anvil and striking them with a polished hammer. This is now completely done away with and mechanically worked flattening machines are used instead. After wire is flattened, it is spun round cotton or silk yarn.

(iii) *Gilding.*—Hot plating and electro-plating are the two processes adopted in gilding the wire. Electro-plating process which is modern, is largely adopted in Surat. There are three main processes of gilding or metal colouring, namely plating ; oxidation ; and dyeing or lacquer varnishing.

(b) At the time of the last inquiry, it was pointed out that the process of manufacture then followed in India was inefficient as compared with the French and German methods of manufacture. Some of the main defects in the manufacturing method were : (i) wire was elongated to a far greater extent than was the practice in Europe. This resulted in the production of finer and weaker lametta which was liable to break ; (ii) the quality and the dyeing of silk thread left much to be desired. The lustre of the gilt was also affected by the excessive handling which the silver thread received during the various processes. We have carefully examined this matter and found that the industry has taken steps to remedy these defects. The quality of the Indian product has improved considerably since the last Tariff Board made its inquiry. The industry has shown initiative and enterprise in making these improvements. It should be pointed out that most of the machinery used at Surat is locally manufactured.

(c) The industry at present suffers from the following defects :—

(i) *Furnace.*—The manufacturers in Surat are still using charcoal furnaces instead of electric furnaces. This defect should be removed as early as possible, as it will eliminate wastage of silver in melting and ensure efficient annealing through controlled temperature. The representatives of the industry pointed out that it was due to lack of electric power supply that they were not installing electric furnaces. When Government's plan of supplying cheap and abundant electricity has been carried out, it is hoped that Surat will have sufficient electricity to install electric furnaces for the smelting of silver. This will definitely improve the quality of the product.

(ii) *Diamond dies.*—To draw wires of uniform thickness and fineness diamond dies are the best. Though they are being manufactured to some extent at Surat, the locally manufactured diamond dies are not of the requisite standard. These require considerable improvements and we recommend that the Council of Scientific and Industrial Research should investigate the problem of manufacturing suitable diamond dies in India. In this connection, we want to point out that most of the improvements made by the industry since 1932 were effected without the assistance of any qualified technical personnel. Although the industry has succeeded in improving the process of manufacture, we feel that qualified technical men are required to place this industry on a sound basis and we recommend that Government should depute some technical men to study the process of manufacture in foreign countries.

(iii) *Winding.*—At present, due to the direct connection between the unwinding of lametta spindle and the winding of thread, the lametta and the thread sometimes drag making the coiling of the lametta over the fibre a little uneven. We were told that a new type of spindle with unwinding and winding arrangements had recently been invented which eliminates this defect.

Structure of the Industry.

10. In Surat there are three different classes of manufacturers of gold thread, *viz.*, (a) the artisans who are cottage workers who buy their own raw materials and sell the finished products in the market ; (b) the *Akhadedars* who obtain the raw materials from small factory owners and merchants, work in their own houses and return the finished product to them ; and the *Akhadedars* are paid on piece-rate basis ; and (c) the factory owners. Persons in the first two groups have no funds with which to buy up-to-date machinery and improve the quality of their products. Further, artisans in these two categories are mostly illiterate and they are not willing to adopt modern ideas and methods. Roughly two-thirds of the industry is in their hands, and consequently, the development of the industry on modern lines has been slow.

Labour.

11. When we visited the silver thread factories at Surat, we found that most of the workers were working in very unhealthy surroundings. We were given to understand that the Factories Act was not strictly enforced in the case of this industry on the ground that it was more of a cottage industry than an organised one. In support of this contention it was pointed out that the production was carried on in domestic workshops, that the employers themselves were artisans and worked side by side with the members of their own families as well as a few hired workers. It was, therefore, suggested by the spokesmen of this industry that the workshops in the silver thread industry should not be placed on a par with factories for the purpose of enforcing the Factories Act. We do not consider that such a view is tenable. Although the workshops are mostly situated in the residential premises of master artisans, they employ a large number of hired workers and earn large profits. Consequently, in the interest alike of the workers and the industry itself, it is definitely desirable that the provisions of the Factories Act as far as practicable should be enforced in the case of this industry. In view of the peculiar structure of the industry, however, it seems to us that the industry may require special treatment in this respect for a few years. We recommend that the Provincial Government concerned should set up a representative committee to inquire and report as to how far and by what stages the Factories Act should be applied to this industry.

Cost of production.

12. The Cost Accounts Officer attached to the Board made an attempt to work out the cost of production of the more important types of gold and silver thread manufactured at Surat. All the factories at Surat are proprietary concerns and keep their books in Gujerati. None of them maintains any systematic cost accounts. In a few cases, where accounts were available, they included domestic expenses, purchase and sale of bullion and transactions relating

to other activities. This made the task of the Cost Accounts Officer difficult and he had to give up the usual procedure of examination of accounts and working out the actual costs of production. Instead, after detailed discussions with the representatives of the industry, he had to build up the estimates of costs. In this way cost estimates were built up for eight different types of gold and silver thread. The figures relating to three principal types out of these eight are given below :—

(i)

Estimate of Cost of Production of one Marc (21 Tolas) of Real Gold Thread.

Specifications : 2,500 *yards to an ounce.*

Items.	Quantity in tolas.	Rate* per tola in Rs.	Value in Rs.
1. *Raw materials* :			
(*a*) Gold	0·20	105·00	21·000
(*b*) Silver	15·75	1·69	26·618
(*c*) Silk yarn (degummed)	5·25	1·00	5·250
(*d*) Gilding chemicals	..	..	0·406
Total raw materials ..			53·274
2. *Power and fuel* :	.	..	0·188
3. *Wages* :			
(*a*) Wire drawing			3·469
(*b*) Silk throwing			2·156
(*c*) Flattening and winding ..			4·954
(*d*) Gilding .. .			1·000
(*e*) Other processes : i.e. Reeling, Bundling and Packing.			1·000
4. *Overheads including depreciation* : ..			1·594
5. Wastage (less recovery) ..			0·500
6. Interest at 4% on Working Capital (equal to 4 months cost of production).			0·909
Cost of production per marc (21 tolas) ..			69·074 or Rs. 69 1 0

(ii)

Estimate of Cost of Production of one Tola of real Silver Thread.

Specifications : 2,500 *yards to an ounce.*

Items.	Quantity in tolas.	Rate* per tola in Rs.	Value in Rs.
1. *Raw materials* :			
(*a*) Silver	0·75	1·69	1·268
(*b*) Silk yarn (degummed)	0·25	0·75	0·188
Total raw materials ..			1·456
2. *Power and fuel* :			0 005
3. *Wages* :			
(*a*) Wire drawing			0·187
(*b*) Silk throwing			0 104
(*c*) Flattening and winding ..			0·286
4. Overheads including depreciation ..			0 083
5. Wastage (less recovery)			0·016
6. Interest at 4% on working capital (equal to 4 months cost of production).			0·027
Cost of production per tola ..			2·124
		Or	Rs. 2 2 0

(iii)

Estimate of Cost of Production of one Pound of imitation Silver Thread No. 30.

Specification No. 30.

Items.	Quantity in lbs.	Rate* per lb. in Rs.	Value in Rs.
1. *Raw materials* :			
(a) Silver	0·02	65·91	1·318
(b) Copper wire 10 swg.	0·68	1·19	0·809
(c) Cotton yarn 30s count	0·30	6·00	1·800
(d) Gilding chemicals .. .			0·094
Total raw materials ..			4·021
2. Power and fuel			0·063
3. *Wages* :			
(a) Wire drawing			1 000
(b) Flattening and winding			1·375
(c) Gilding			0·125
(d) Other processes, *e.g.*, Reeling, Bundling, Packing.			0·125
4. Overheads including depreciation ..			0·835
5. Wastage (less recovery)			0·120
6. Interest at 4% on Working Capital (equal to 4 months cost of production).			0·102
			7.769 or Rs. 7 12 0

* The rates for gold, silver, etc., given in column three of this table are the average rates at which purchases were made during 1947.

From the above estimates, it will be seen that in respect of real gold and silver thread the cost of gold and silver constitutes from 60 to 70 per cent of the cost of production. The price of bullion is a fluctuating factor, and it is difficult to estimate the future costs with any accuracy.

Imports.

13. At the time of the last Tariff inquiry, France was the most important competitor in the Indian market. But since 1932-33, imports of gold and silver thread from France steadily declined ; and in 1939-40, they were only worth Rs. 30,607 as compared with Rs. 6,71,554 in 1932-33. In the same period imports from Germany, however, steadily increased from Rs. 2,75,000 in 1932-33 to Rs. 3,61,956 in 1937-38, but they declined to Rs. 1,95,385 in 1938-39. Similar was the position regarding the import of lametta. In other words, just before the war, the competitive position of France was considerably weakened and there was practically no import from that source. Even German imports were negligible if we consider the total production of the article in India at that time. Appendices VI and VII show the " Value of Imports of Gold and Silver Thread and Lametta from principal foreign countries."

C.i.f. price and landed cost.

14. There have been no imports of gold and silver thread into this country since 1942-43. Consequently no figures of recent c.i.f. prices and landed cost are available.

Extent of present protection.

15. The silver thread industry was protected in 1931 by the Gold Thread Industry (Protection) Act, by which a 50 per cent. *ad valorem* duty was levied on all silver thread and wire (including so-called gold thread and wire mainly made of silver) and silver leaf, including also imitation gold and silver thread and wire, lametta and metallic spangles and articles of a like nature, of whatever metal made. In 1932, for revenue purposes, the duty was increased by one-fourth thus bringing it to 62½ per cent. *ad valorem*. In 1934, the same duty was extended to fabrics containing gold and silver thread. In 1935 by the Finance Department Notification No. 33, all gold thread articles were exempted from any duty in excess of 50 per cent. In other words, the duty was again brought down to the level of duty recommended by the Tariff Board for purposes of protection. In 1942, Government levied a surcharge of one-fifth of the then existing duty, thereby raising the duty to 60 per cent *ad valorem* which is still in force.

Withdrawal of protection.

16. As a result of the recommendations made by the previous Tariff Board, the silver thread industry received substantial protection from 1931. In addition, the industry had, during the period of World War II, a close market for its products due to complete stoppage of imports. The previous Tariff Board expected that the protection of the industry for a period of 10 years would be sufficient to enable it to reach the standard of the imported material. The industry has, however, already enjoyed protection for a period of 17 years. Nevertheless, it was argued by the manufacturers at the public inquiry that, in spite of this long period of protection the industry was not yet in a position to compete successfully with certain qualities of the imported material, especially with the French fine and half fine quality. They also apprehended that if the industry was deprived of protection, French and German gold and silver thread would come in large quantities and oust the Indian material from the market. The Provincial Governments and the consumers also stressed the need for continued protection being given to this industry

In considering the question whether the silver thread industry still needs protection, it must be remembered that before the war, competition from France and Germany was mainly confined to half fine and imitation gold thread. During the war, the industry made considerable progress in these two lines and has been able to capture the entire market in the country. It is also recognized by consumers that the quality of the Indian material is almost as good as that of the imported material. Further, due to unsettled conditions in Europe, there is no likelihood of large-scale imports coming in from France and Germany and at competitive prices in the near future. Moreover, silver thread being an article of luxury will presumably continue to be subject to a high revenue duty, which will serve to safeguard the industry. The Board has, therefore, come to the conclusion that the present protection should be withdrawn. If, however, the silver thread industry is threatened by foreign competition at any future time, the matter can be referred to the Board for a summary inquiry and report.

Other assistance required by the industry.

17. (a) The industry wants Government to establish an Institute of Technology to train up artisans in the use of improved type of machinery and modern technique. We were told that the industry had placed at the disposal of the Bombay Government a sum of Rs. 5,00,000 for starting such an Institute. We strongly recommend that Government should take early steps to establish an Institute of Technology or at least a technical school where artisans could be trained.

(b) Another claim put forward by the industry was that when the silver thread is exported, Government should grant a drawback of the duty paid on the silver content of the exported article. We do not think that there is a case for the grant of such a drawback in the present circumstances.

(c) The industry also wants that Government, when entering into any trade agreement with Pakistan, should include jari and jari products in the list of articles in respect of which duty-free movement should be permitted between the two Dominions. As Pakistan is one of the important consuming centres of silver and gold thread manufactured in India, such an arrangement will be helpful to the industry and we recommend that Government should bear this claim in mind when fresh trade agreement is negotiated.

(d) Provincial Governments should take steps to assist the reorganisation of the industry and to improve its technique and marketing methods, so that the industry is able to stand on a par with similar industries in other countries.

Need for export drive.

18. During the last war *jari* goods were purchased in large quantities by foreigners who came to India. There is scope for the export of these goods in appreciable quantities. We recommend that Government should ask the Indian Trade Commissioners abroad to explore the possibilities of developing an export market for this article.

19. Our conclusions and recommendations are summarised as follows :—

Summary of conclusions and recommendations.

(i) The scope of the present enquiry is limited to silver thread and wire (including so called gold thread and wire mainly made of silver) and silver leaf, including also imitation gold and silver thread and wire, lametta, and metallic spangles and articles of a like nature, of whatever metal made and fabrics containing gold or silver thread. (Paragraph 2.)

(ii) The gold thread industry is an ancient industry of India. It was able to survive foreign competition solely due to the high revenue duty imposed by Government in 1922 and to the subsequent protective duty of 50 per cent. *ad valorem* on the recommendation of the Tariff Board Report of 1930. (Paragraph 4.)

(iii) The Indian gold thread industry has its main centres at Banares and Surat. [Paragraph 4(d).]

(iv) The total Indian production is worth about Rs. 10 crores of silver thread and allied products. The total number of people employed is nearly 40,000 to 45,000. The total capital employed in Surat and Banares comes to about Rs. 3½ crores. [Paragraph 4(d).]

(v) There are 16 principal types of gold and silver thread and wire, etc., manufactured in India and they vary in length from 1,200 yards to 2,500 yards per ounce. (Paragraph 5.)

(vi) Silver and gold thread is used in weaving, brocade, embroidery, laces, etc. (Paragraph 6.)

(vii) The quality of the Indian gold and silver thread has improved considerably since 1930 and is at present as good as that of the imported article. (Paragraph 7.)

(viii) Most of the raw materials required by the industry are available in India. (Paragraph 8.)

(ix) The industry has taken steps to remedy most of the defects in the process of manufacture since the last Tariff Board Report. The Council of Scientific and Industrial Research should, however, investigate the problem of manufacturing suitable diamond dies ; and should also depute some technical men to study the process of manufacture in foreign countries. (Paragraph 9.)

(x) In Surat there are three different classes of manufacturers, *viz.*, artisans, Akhadedars and factory owners engaged in the industry. (Paragraph 10.)

(xi) In Surat most of the workers are working in very unhealthy surroundings and the Factories Act is not at present being enforced. It is recommended that the Provincial Government concerned should set up a representative committee to inquire and report how far and by what stages the Factories Act should be applied to this industry. (Paragraph 11.)

(xii) The cost of gold and silver in the manufacture of gold and silver thread constitutes from 60 to 70 per cent. of the total cost of production. (Paragraph 12.)

(xiii) During World War II imports from foreign countries dwindled considerably and at present there are no imports at all. (Paragraph 13.)

(xiv) As there have been no imports since 1942-43, no figures of recent c.i.f. prices and landed costs are available. (Paragraph 14.)

(xv) The silver thread industry was first protected in 1931 by a duty of 50 per cent. *ad valorem*. The present duty is 60 per cent. *ad valorem*. (Paragraph 15.)

(xvi) Since the industry has made substantial progress during the last several years and has been able to capture the entire market in this country, and since there are at present no imports, no protection is necessary in the present circumstances. (Paragraph 16.)

(xvii) Government should take early steps to establish an Institute of Technology or technical school where artisans can be trained. [Paragraph 17(a).]

(xviii) The claim of the industry for the drawback of duty in respect of the silver content of the exported article is not justified. [Paragraph 17(b).]

(xix) In future negotiations for a trade treaty with Pakistan, Government should bear in mind the desirability of duty-free movement of jari and jari products between the two Dominions. [Paragraph 17(c).]

(xx) Provincial Governments concerned should take steps to assist the reorganisation of the industry and to improve its technique and marketing methods. [Paragraph 17(d).]

(xxi) Government should ask the Indian Trade Commissioners abroad to explore the possibilities of developing an export market for jari and jari products. (Paragraph 18.)

Acknowledgments. 20. We wish to thank Mr. M. P. Kanga, Director of Industries, Government of Bombay, Mr. H. N. Desai, District Industrial Officer, Surat, and our Cost Accounts Officer, Mr. P. V. R. Rao, for the valuable assistance in connection with this enquiry.

G. L. MEHTA, *President.*

H. L. DEY, *Member.*

B. V. NARAYANASWAMY, *Member.*

RAMA VARMA,
Assistant Secretary.

BOMBAY,
4th October 1948.

APPENDIX I-A.

GOVERNMENT OF INDIA.

MINISTRY OF COMMERCE.

New Delhi, the 10th April 1948.

RESOLUTION.

TARIFFS.

No. 134-T(19)|47.—In pursuance of paragraph 2 of their Resolution in the Department of Commerce No. 28-T(6)|46, dated the 20th January 1947, the Government of India have decided to refer to the Tariff Board for investigation the cases of the following industries which were established before the war and were granted tariff protection on the basis of recommendations made by previous Tariff Boards :—

i. Magnesium Chloride ;
ii. sericulture ;
iii. artificial silk and cotton and artificial silk mixed fabrics ;
iv. silver thread and wire (including so called gold thread and wire mainly made of silver) and silver leaf including also imitation gold and silver thread and wire, lametta and metallic spangles and articles of a like nature, of whatever metal made, and fabrics containing gold or silver thread ; and
v. sugar.

The protection in these cases which was extended from time to time has been continued for a further period of one year from the 1st April 1948 by the Protective Duties Continuation Act, 1948.

2. The Tariff Board is accordingly requested to examine in detail the question of protection enjoyed by the above mentioned industries and to report to the Government of India what protective measures, if any, should be continued after the 31st March 1949.

3. Firms and persons interested in any of these industries or in industries dependent on the use of these articles, who desire that their views should be considered by the Tariff Board should address their representations direct to the Secretary to the Board, Contractor Building, Nicol Road, Ballard Estate, Bombay.

ORDER.

Ordered that a copy of this Resolution be communicated to all Provincial Governments, all Chief Commissioners, several ministries of the Government of India, etc.

Ordered that a copy be communicated to the Governments of Burma and Pakistan.

Ordered also that it be published in the Gazette of India.

S. RANGANATHAN,
Joint Secretary to the Government of India.

APPENDIX I-B.

Gazette Extra-ordinary.

GOVERNMENT OF INDIA.

DEPARTMENT OF COMMERCE.

New Delhi, the 20th January 1947.

RESOLUTION.

TARIFFS.

No. 28-T(6)|46.—In their Resolution in the Department of Commerce No. 218-T(55)|45, dated the 3rd November 1945, the Government of India announced the setting up of a Tariff Board to investigate claims for assistance or protection received from industries which have been started or developed in war time.

2. Government have also under consideration the question of continuance of protection to certain industries which were established before the war and were granted tariff protection on the basis of recommendations made by previous Tariff Boards. They have decided to request the Tariff Board, set up under the Resolution referred to in the preceding paragraph, to investigate and advise them with regard to the claim of such industries.

3. Government recognise that in the present abnormal conditions, it would not be possible to formulate a long term tariff policy in respect of the well established industries. The Tariff Board is accordingly requested to hold summary inquiries and advise Government whether, in present circumstances, protection at the existing or at a different scale should be granted for a further year after the 31st March 1947 to the following industries :—

(1) Sugar ;

(2) Paper and wood pulp ;

(3) Cotton Textiles ;

(4) Iron and Steel.

(Sd.) N. R. PILLAI,

Secretary to the Government of India.

APPENDIX II

QUESTIONNAIRE.

Information required :—

(1) Please give the number of factories with their locations, manufacturing gold and silver thread in the Province.
(2) Please give an estimate of the amount of capital and number of workers employed in the Industry.
(3) What are the principal types of gold and silver thread manufactured in the Province ?
(4) Explain the differences between the various types ?
(5) What is the most representative type of gold and silver thread in use ?
(6) What is the quantity of each different type of gold and silver thread manufactured in the Province ?
(7) How is the difference between the real and imitation gold and silver thread determined ?
(8) What are the principal raw materials used in the manufacture of gold and silver thread ?
(9) From where are these materials obtained and at what prices ?
(10) What quantity of each of the raw materials is required per reel of thread ?
(11) What power is generally used in the factories ?
(12) What is an economic unit of production ? What is the smallest unit of production which can be operated economically under present day conditions ?
(13) Give a brief description of the plant and machinery used in the manufacture of gold and silver thread ?
(14) Please describe in detail the process of manufacture of gold and silver thread ?
(15) What parts of machinery are made in India ?
(16) Please give the cost of manufacture of different types of gold and silver thread ?
(17) What are the improvements effected since 1930 ?
(18) Have any attempts been made to standardise the quality ?
(19) What is your estimate of the gold and silver thread consumed in India ?
(20) In what parts of India are the principal markets situated ?
(21) Which are the foreign countries which offer their competition in Indian markets ?
(22) What are the principal classes of gold and silver thread imported ?
(23) To what extent does imitation gold and silver thread compete with real gold and silver thread of Indian manufacture ?
(24) Do you consider that, as compared with foreign manufacturer, the Indian manufacturer is at a disadvantage in all or any of the following points ?
  (a) cost of plant or machinery ;
  (b) cost of expert labour ;
  (c) cost and efficiency of ordinary labour ;
  (d) the provision of raw materials ;
  (e) freights on finished goods ;
  (f) customs duty on imported materials ;
  (g) the raising of capital.
(25) Is there any difference in quality recognised by the trade between imported and Indian-made gold and silver thread ?
(26) Do you think that without the help of protection the industry is not likely to stand foreign competition ?
(27) Do you think that the industry will eventually be able to face world competition without protection ?
(28) What measure of protection would be necessary for the industry ?

APPENDIX III

List of firms, Associations, Producers, Consumers, Importers and individuals, etc., to whom the questionnaire has been issued or who sent memoranda.

A.—*Producers—Associations* :

1. The Jari Merchants' Association, Surat.
*2. The Surat Jari Goods Producers' Co-operative Society, Ltd., Surat.
*3. Surat Chamber of Commerce, Surat.
4. Southern India Chamber of Commerce, Madras.
5. Banares Silk Merchants' Chamber, Banares.
*6. Banares Industrial and Trade Association, Banares.

B.—*Producers* :

**1. The Gauri Gold and Silver Works Co., Surat.
*2 Madhusudan Rangildas Gandhi, Surat.
3. Thakordas Maneklal & Co., Surat.
4 Na..verlal Thakordas Jariwala, Surat.
5 Rajendra Jari Factory, Surat.
6 Vipinchandra Jari Factory, Surat.
*7 Tayabbhai Hebatbhai, Surat.
*8 Tribhuvandas Amthabhai, Surat.
9. Abdul Majid N. Jariwalla, Surat.
10. Prabhudas Bhaichand & Co., Surat.
*11 Jekisondas Nathubhai Jariwalla, Surat.
12 Thakordas Lalbhai, Surat.
13. T. K. Brothers, Surat.
14. Prembhai Bhulabhai, Surat.
15. Bukhandas Nathubhai Jariwalla, Surat.
16. Hiralal Ranchoddas & Brothers, Surat.
17 Pannalal Girdhalal, Delhi.
*18 B.G.T. Company, Ltd., Bangalore City.

C.—*Consumers* :

*1. B. S. Shankarapasetty, Bangalore.
2. G. C. Siddaveerappa, Bangalore City.
3. V. V. P. Venkatadass Chetty, Gugai, Salem.
4. Dhanakoti Chetti, Gugai, Salem.
*5. Motor Cycle Gold Thread Agency, Coimbatore.
*6. Lace Trading Co., Madura.

Consumers—contd.

7. S. A. Subbayer & Co., Kumbakonam.
8. Fatehchand Meghraj Jariwala, Coimbatore.
*9. B. Devaiah Setty & Sons, Bangalore.
10. M. Ratilal & Brothers, Banares.
11. Isvar Prasad Vishwanath Prasad, Banares.
*12. Champakadama Silk Throwing & Wvg. Factory, Bangalore City.
13. Chandiram Silk Mills, Bangalore.
14 Gangabisha Anant Rai, Nagpur.
15. Damodar Jagobaji Bhadke, Nagpur.
16. Handloom Weavers' Association, Madras.
**17. Surat Weavers Co-operative Producers' Society, Ltd., Surat.

D.—*Importers* :

1. A. T. Palanpurwala, Bombay.
2. Chunilal Cooverji, Bombay.
3. Hebotbhoy Abdeali, Bombay.
4. Narayan Ramchandra & Co., Bombay.
5. Mohamedali Gulamhusein Imani, Bombay.

E—*Directors of Industries and Others* :

*1. Director of Industries and Commerce, Madras.
*2. Director of Industries, Bombay.
3. Director of Industries, C.P., Nagpur. Not manufactured in the Province.
4. Director of Industries, (W. Bengal), Calcutta. Not manufactured in the Province.
5. Director of Industries, (Assam), Shillong. Not manufactured in the Province.
6. Director of Industries, (Bihar), Patna.
*7. Director of Industries, (Orissa), Cuttack.
*8. Director of Industries (E. Punjab), Jullundur.
*9. Director of Industries and Commerce, (U.P.), Kanpur.
10. Superintendent of Industries, Delhi.
11. The Economic Adviser to the Government of Madras, Madras.
12. D. A. Shah, Esq., Joint Registrar of Industrial Co operatives and Village Industries, Government of Bombay, Poona.
*13. The National Insulated Cable Co. of India Ltd, Calcutta.
*14. Surat Jari Kamdar Mandal, Surat.
*15. Shree Jari Akhadekar Hitvardak Mandal, Surat.

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*Indicates those who have replied to our questionnaire or submitted memoranda.

**Indicates those who are not interested in the inquiry.

APPENDIX IV

List of Factories visited by the Board on 12th June 1948

1. Bhaichandbhai Parsamani	Gold plating by old hot process plating.
2. Tayabbhai Hebatbhai	Imitation wire drawing, gilding, flattening, thread winding.
3. Hiralal Ranchoddas	Silver smelting & silver wire manufacturing.
4. Jekisondas Nathubhai Jariwala	Silver wire manufacturing and Gold thread and Silver thread manufacturing.
5. Surat Engineering Works	Manufacture of Gold thread manufacturing machinery.
6. Cottage Works in Navapura Golwad ..	Manufacture of Gold and Silver thread.
7. Handloom, Saree and Brocade Weaving Factory, Mia Sidiqui.	Weaving of Silver thread.
8. Seth Balabhai Nallabhai	Manufacture of Broondes, Borders, etc.

APPENDIX V

List of Parties to whom invitation to give Oral evidence was issued.

A.—Producers' Association :	*Those who replied stating that they would be represented by.*
*1. The Jari Morchants' Association, Surat.	Seth Vinaiklal Damodardas Jariwala.
*2. The Surat Jari Goods Producers' Co-operative Society, Ltd., Surat.	Vice President, Sheth Chandulal Gabalbhai Kantliwala.
*3. The Surat Chamber of Commerce, Surat	Mr. Ranchhoddas T. Popawala. Mr. Chimanlal L. Shah.
4. Southern India Chamber of Commerce, Madras.	
5. Banares Silk Merchants' Chamber, Banares.	
6. The Banares Industrial & Trade Association, Banares.	

B.—Producers :	
*1. The Gauri Gold & Silver Works Co., Surat.	Mr. V. B. Shastri.
*2. Madhusudan Rangildas Gandhi, Surat.	Self.
3. Thakordas Maneklal & Co., Surat.	
*4. Natverlal Thakordas Jariwala, Surat.	Seth Manchhubhai Manganlal Jariwala.
5. Rajendra Jari Factory, Surat.	
6. Vipinchandra Ratilal & Co., Surat.	
7. Tayabbhai Hebatbhai, Surat.	Mr. Ahmedbhai Abdeali.
8. Tribhuvandas Amthabhai, Surat.	
9. Abdul Majid. N. Jariwala, Surat.	
*10. Parbhudas Bhaichand & Co., Surat.	Mr. Parbhudas.
*11. Jekisondas Nathubhai Jariwala, Surat.	Mr. Bhagubhai Nathubhai Jariwala.
12. Thakordas Lalbhai, Surat.	
13. T. K. Brothers, Surat.	
14. Prembhai Bhulabhai, Surat.	
15. Bhukhandas Nathubhai Jariwala, Surat.	Mr. Mohanlal Bhukhandas Talia.
16. Hiralal Ranchhoddas & Brothers, Surat.	

APPENDIX V—*contd.*

	Those who replied stating that they would be represented by.
C.—Importers :	
1. M/s. A. T. Palanpurwala, Bombay.	
2. Chunilal Cooverji, Bombay.	
3. Hebothbhoy Abdeali, Bombay.	
4. Narayan Ramchandra & Co., Bombay.	
5. Mohamedali Gulamhusein Imani, Bombay.	
D.—Consumers :	
1. B. S. Shankarapasetty, Bangalore City.	
2. G. C. Siddaveerappa, Bangalore City.	
3. V. P. P. Venkatadas Chetty, Gugai, Salem.	
4. Motor Cycle Gold Thread Agency, Kancheepuram.	Not attending.
5. The Lace Trading Co., Madura.	
6. B. Deviah Setty & Sons, Bangalore City.	
7. M. Ratilal & Bros., Banares.	
8. Sree Champakadama Silk Throwing & Weaving Factory, Bangalore City.	
9. Damodar Jagobaji Bhadke, Nagpur.	
10. Handloom Weavers' Association, Madras.	
11. Surat Weavers' Co-operative Producers' Society, Ltd., Surat.	
E.—Directors of industries :	
*1. Director of Industries & Commerce, Madras.	Khan Bahadur D. M. Amalsad.
*2. Director of Industries, Bombay ..	Mr. M. P. Kanga. Mr. H. N. Desai. Mr. V. V. Apte.
*3. Director of Industries, Orissa, Cuttack	Mr. G. D. Kirpekar.
4. Director of Industries & Commerce, U.P., Kanpur.	Mr. J. C. Seth.
*5. Mr. D. A. Shah, Joint Registrar for Industrial Co-operatives & Village Industries, Poona.	Mr. D. N. Savkur.

(* indicates those who were actually present at the enquiry).

APPENDIX VI

Statement showing the value of Imports (in Rs.) of Gold and Silver Thread into British India from the principal countries of consignment since* 1931-32.

(1)	1931-32 (2)	1932-33 (3)	1933-34 (4)	1934-35 (5)	1935-36 (6)	1936-37 (7)	1937-38 (8)	1938-39 (9)	1939-40 (10)	1940-41 (11)	1941-42 (12)	1942-43 (13)	1943-44 (14)	1944-45 (15)	1945-46 (16)	1946-47 (17)	1947 (18)
VALUE OF IMPORTS FROM :																	
United Kingdom .. (including Channel Islands).	1,032	1,787	1,847	12,421	460	61	2,675	48	Not available			..	..	..	..	..	..
Ceylon (including Maldives)	2,479	41,456	11,532	5,417	2,930	3,085	352	..				..	..	..	..	..	..
Other British Possessions	17	235	211	55	..	..	..	171				..	..	..	..	..	..
TOTAL BRITISH EMPIRE.	3,528	43,478	13,590	17,893	3,390	3,146	3,027	219	1,253	687	8	..	..	..	..	..	..
Germany	2,45,786	2,75,177	2,55,370	2,68,530	3,38,312	3,29,673	3,61,956	1,95,385	46,337	..	..	..	..	..	..	..	..
France	4,01,706	6,71,554	3,76,307	1,79,961	1,71,140	35,765	55,858	33,911	30,607	19,245	..	..	..	..	..	..	..
Japan	39	6,433	27	..	522	..	..	..	..	..	..	..	..	..	..	..	..
Other foreign Countries ..	4,656	1,428	343	2,792	2,866	2,954	10	350	..	2,576	1,159	..	..	..	..	..	..
GRAND TOTAL ..	6,55,715	9,98,070	6,45,637	4,69,176	5,16,230	3,71,543	4,20,851	2,29,865	78,197	22,508	1,167	..	..	..	..	..	..

* Inclusive of Imports by Postal Packets referred to Collector of Customs for assessment.

APPENDIX VII

Statement showing the value of Imports (in Rupees) of Lametta into British India from the principal countries of consignment.

(1)	1931-32 (2)	1932-33 (3)	1933-34 (4)	1934-35 (5)	1935-36 (6)	1936-37 (7)	1937-38 (8)	1938-39 (9)	1939-40 (10)	1940-41 (11)	1941-42 (12)	1942-43 (13)	1943-44 (14)	1944-45 (15)	1945-46 (16)	1946-47 (17)	1947 (18)
VALUE OF IMPORTS:																	
United Kingdom (including Channel Islands).	863	17,673	978	5,357	247	Not available	..	Not available			..	..	..	..	..	..	..
Other British Possessions	39	50	9	..	29		..				..	..	..	..	..	..	..
Total British Empire ..	902	17,723	987	5,357	276	886	..	70	32	228	..	..	..	..	..	..	..
Germany	1,89,122	3,53,311	2,88,566	2,34,512	3,33,643	2,40,207	1,97,345	2,97,903	94,547	..	..	..	..	..	..	..	..
France	2,69,723	2,39,949	1,29,800	65,330	90,637	56,211	51,248	41,011	55,902	14,109	..	..	..	..	..	..	..
Other Foreign Countries	745	..	..	688	813	4,379	..	1,450	..	..	7 (Japan).	..	..	..	..	..	..
GRAND TOTAL ..	4,60,492	6,10,983	4,19,353	3,05,887	4,25,369	3,01,683	2,48,593	3,40,434	1,50,481	14,337	7	..	..	..	..	..	..

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GOVERNMENT OF INDIA

MINISTRY OF COMMERCE

REPORT OF THE INDIAN TARIFF BOARD

ON THE

WIRE HEALDS INDUSTRY

BOMBAY

1948

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WIRE HEALDS INDUSTRY

Application for protection and reference to the Board.

1. The C. J. Textile Accessories Works, Bombay, in its letter No. 91|GCV|PERF|6352, dated 16th May 1946, applied to the then Department of Commerce, Government of India, for protection and general assistance to the wire healds industry. The case of the industry was referred to the Tariff Board by the then Department of Commerce, Government of India, in its Resolution No. 218-T(55)|45, dated 15th March 1947 read with paragraphs 2 and 7 of the Resolution No. 218-T(55)|45, dated 3rd November 1945 for investigating its claim for protection or assistance.

Terms of reference.

2. Under the Board's terms of reference which are stated in paragraph 5 of the resolution of 3rd November 1945, the Board has to inquire and report whether the industry satisfies the following conditions :—

(1) that it is established and conducted on sound business lines ; and

(2) (a) that, having regard to the natural or economic advantages enjoyed by the industry and its actual or probable costs, it is likely within a reasonable time to develop sufficiently to be able to carry on successfully without protection or State assistance ; or

(b) that it is an industry to which it is desirable in the national interest to grant protection or assistance and that the probable cost of such protection or assistance to the community is not excessive. Where a claim to protection or assistance is found to be established *i.e.*, if condition (1) and condition (2) (a) or (b) are satisfied, the Board will recommend—

(i) whether, at what rate and in respect of what articles, or class or description of articles a protective duty should be imposed ;

(ii) what additional or alternative measures should be taken to protect or assist the industry ; and

(iii) for what period, not exceeding three years, the tariff or other measures recommended should remain in force.

In making its recommendations, the Board has to give due weight to the interests of the consumer in the light of the prevailing conditions and also to consider how the recommendations affect industries using the article in respect of which protection is to be granted.

Method of Inquiry.

3. The Board issued a Press Communiqué on 17th March 1947 inviting all interests, connected with the industry, including producers, importers and consumers who desired their views to be considered by the Board, to submit their representations. Detailed questionnaires were issued in April 1947. Appendix I contains the list of Associations and persons to whom the questionnaires were issued and from whom replies or memoranda were received. It may be mentioned that the original applicant in this case, *viz.*, C. J. Textile Accessories Works at Vile Parle, Bombay, is the only known producer of wire healds in the country at present. Mr. R. Sundaram, the Cost Accounts Officer, with the help and advice of Mr. R. N. Kapur, Technical Adviser to the Board, investigated the cost of manufacture of wire healds at C. J. Textile Accessories Works. The Members of the Board, with its Secretary and its Technical Adviser visited the works on 14th January 1948. The President of the Board visited the factory on 23rd January 1948.

A public inquiry was held at Bombay on 18th February 1948. Appendix II contains the list of persons who were invited for giving evidence at the public inquiry and Appendix III gives the names of those who attended the inquiry.

History of the Industry.

4. Before the war, wire healds required for the textile industry were imported from abroad—mostly from Japan and the U.K. and to a small extent from Italy and Switzerland. By 1940 imports of wire healds from foreign countries were almost completely stopped and the scarcity of these mill-stores was actually felt by the textile industry. At this stage, C. J. Textile Accessories Works prepared a scheme for the production of wire healds and approached the Textile Directorate for assistance in securing the necessary raw materials. Government made the necessary arrangements to enable the firm to import steel wire from the U.K. with a high priority. Instructions were also issued to the Departments concerned for the release of other raw materials required for this industry. The firm was also given facilities for importing tools and machinery for the factory. It started production in 1941. However, owing to lack of technical personnel and up-to-date machinery, its production fell short of its rated capacity and its manufactures did not attain the requisite standard.

Varieties of Wire Healds.

5. (a) *Types.*—There are several types of wire healds. The most common type is the ' Twisted eye ' wire heald with round or oblong end loops. This type is mainly used for weaving cotton and silk cloth. Other ordinary types are ' Inserted eye ' healds and ' Strip or Flat steel ' healds. ' Inserted eye ' healds are required for jacquard used with lingoes ; ' Strip or Flat Steel ' healds are chiefly required for linotype and very fine cloth weaving. Healds for woollen or jute fabrics or canvas are of thicker gauges of wire than those used in healds for cotton or silk goods. There are still other types of wire healds used for special purposes, such as, weaving of carpets, velvet, cocos, ribbons and belts.

(b) *Sizes.*—The most common types of wire healds are those with the twisted centre eye, measuring $9\frac{1}{2}''$ or $10\frac{1}{4}''$ between the end loops and are

made from wire of 27 gauge. These loops, whether round or oblong, are 6 m.m. in size. Handlooms, specially in South India, however, require wire healds with 10 m.m. round loops. Longer healds, *e.g.*, 11″ or above, are in fact odd sizes and are hardly used for weaving cotton cloth in India. For fine cloth weaving 30 gauge wire healds are generally used. For silk weaving, 13″ or 13.1|8″ healds with oblong loops and made of 30 or 32 gauge wire are necessary. For jute, canvas and woollen weaving, healds 13″ and above in length and of 20 to 24 swg. are used.

Comparison between wire healds and cotton healds.

6. (a) Wire healds serve the same purpose as cotton healds. But in the case of cotton healds, there is a specific heald for each count of yarn to be woven. When a count of yarn is changed, the cotton heald must also be changed. In the case of wire healds, however, healds of one size can be used for a wide range of counts. This saves time and labour.

(b) Before World War II, cotton healds were mostly used in the cotton textile industry, whereas wire healds were largely used in the handloom and the silk industries. It is estimated that about 75 per cent. of the cotton mills use cotton healds, and only about 25 per cent., wire healds. We understand that there is a general tendency now on the part of the cotton mills to change over to wire healds. Wire healds are initially more expensive than cotton healds, but wire healds last much longer than cotton healds and thus wire healds prove cheaper in the long run. A set of wire healds lasts for about 25 beams whereas a similar set of cotton healds lasts only for about 6 beams. Incidentally it may be mentioned that cotton healds are manufactured in a large quantity in India principally by three mills, namely, Mahendra Mills, Kalol, New India Industries, Baroda, and India United Mills, Bombay.

Machinery required for the industry.

7. In the past, most of the wire healds were imported, as has been said before, from Japan and Great Britain. The machines required for the production of wire healds are automatic ; in the pre-war years they were made solely by two manufacturers in Germany. E. Kirks & Co., Blackburn, Lancashire, and a few other manufacturers in the United Kingdom, have also been using German machines in the past. As the two factories manufacturing wire healds machinery in Germany were destroyed during the war, British manufacturers have now taken up the manufacture of similar machines. The demand for these machines being small, they are not produced on a mass scale. We were informed that some quotations for these machines were recently obtained from the U.S.A., by C. J. Textile Accessories Works. As healds are essential stores for cotton mills, it is desirable that their manufacture on up-to-date lines should be encouraged in the country. We, therefore, recommend that the manufacturers of wire healds should be given every facility to import necessary machines from foreign countries, including the hard currency areas. If, however, they are not available from abroad, Government should explore the possibility of producing these machines in one of the ordnance factories in the country.

8. There are various kinds of wire healds in use in the textile industry. Our investigation, however, has been confined to wire healds of the most common type, *viz.*, ' twisted eye ' wire heads with round or oblong end loops, measuring 9½" or 10½" between the end loops and made from wire of 27 gauge. These loops, whether round or oblong, are 6 m.m. in size.

Scope of the inquiry.

9. The two main items of raw materials required for the manufacture of wire healds are steel wire and tin. Other necessary materials are : hydrochloric acid, furnace oil, aviation spirit, zinc, card-board and packing paper. Of these, only steel wire of required gauge, tin and zinc have to be imported into the country from abroad. Other materials are locally available. The Indian Steel & Wire Products Ltd., in its letter No. 3325|47|1|Genl., dated 5th August 1947 has informed the Board that it has already placed orders for suitable machinery which can draw 28 and 32 gauge wires. This firm expects to receive the machinery by the middle of 1948, soon after which it will produce wires of the required gauges.

Raw materials.

10. The successive steps in the process of manufacture of wire healds are as under :—

Process of manufacture.

(i) Two wires of required gauge, after they have been cleaned by passing through a hot tube and an acid bath, are tinned together in a tinning furnace to form a double wire.

(ii) The double wire is then mechanically cut into pieces of required lengths.

(iii) These pieces are fed into automatic machines called ' twisters ' where the two ends of each piece are automatically bent over and twisted to form a loop at either end. The centre of the piece is pierced and similarly twisted to form a small ' eye '.

(iv) The healds made on the twisters are removed to a soldering machine where the twisted portions of the heald are soldered to form a smooth and strong joint.

(v) Finally, the wire healds are carefully inspected and then threaded together to form bundles of 1,000 pieces each.

11. Wire healds are used for dividing the warp into two portions for inserting the weft. They are mounted on a frame which is placed immediately in front of the warp before it passes through the reeds.

Uses of the product.

12. The annual demand for wire healds in India as given by C. J. Textile Accessories works is 55,000 bundles of 1,000 pieces each. This firm expects the future demand of wire healds to be about three times that figure whereas the Star Trading Co., Bombay, estimate the demand at 100,000 bundles per year. The Ministry of Industry and Supply, however, estimate the future consumption at 70,000 bundles of 1,000 pieces each. At the public inquiry it was agreed that at least 80,000 bundles would be required by the cotton

Estimated Indian demand.

textile industry. During the inquiry, it was disclosed that there was a growing tendency on the part of the cotton mills to switch over from cotton healds to wire healds when wire healds of proper quality are available. It was, therefore, agreed at the public inquiry that the demand might be taken at 80,000 bundles per annum in the next three years.

Statistics of Imports.

13. Wire healds are not shown separately in the annual Statement of the Sea-Borne Trade of India. They are included under "Textile Machinery, other stores". The Ministry of Industry and Supply estimate that about 55,000 bundles of wire healds used to be imported annually before the war. The Textile Commissioner has given the following figures of imports of wire healds from 1942 to 1945 :—

	Bundles.
1942	48,162
1943	42,936
1944	52,913
First 9 months of 1945	73,083

Mr. Stott, a representative of Uones Textilaties Export Co., Ltd., stated at the public inquiry that during 1947 his firm alone imported 4,900 bundles which, he pointed out, covered only 10 per cent. of the enquiries received by them. This would show that there is a large unsatisfied demand for imported wire healds and only a part of it is met by imports. It is, however not possible to forecast with any accuracy the volume of imports of wire healds that may be expected to come into the country during the next two or three years. But, in view of the fact that, under the present import control, licences are to be freely issued for importing this article from both dollar and non-dollar areas, its imports will probably go up in volume.

Domestic Production.

14. As has already been stated, C. J. Textile Accessories Works, Bombay, is the only known factory producing wire healds in the country. Its annual production figures are as follows :—

Year.	Bundles of 1 000 pieces each.
1941	600
1942	335
1943	2,665
1944	3,812
1945	6,700
1946	5,964
1947	6,819

This Company has 10 automatic twisters and the present maximum capacity of each twister as determined by the Board's Technical Adviser is 32 healds per minute. On this basis, production per machine per day of 8 hours will be 15,360 healds. For 10 such machines working 8 hours per

day, the annual production, on the basis of 300 working days, will work out to 46,080,000 healds or 46,080 bundles of 1,000 healds each. But as the machines are old and the parts are not standardized and interchangable, we have to make allowance for breakdowns. We have, therefore, allowed 30 per cent. for interruption due to breakdown. We have also assumed that only 8 machines on an average will work throughout the year. On this basis, the production can be assumed to be 25,805,000 pieces or 25,805 bundles of healds in 1948. As the firm has ample stocks of wire, and other raw materials at present, it should be able to attain the above production. The firm does not expect to obtain any new machinery in 1949 but proposes to run the factory on two shifts. Allowing for reduction in output by 25 per cent. in the second shift as compared with that of the first shift, the expected output in 1949 and 1950 will be 45,158 bundles of wire healds per year. It will be noted, however, that even if the firm attains this production in 1949 and 1950, its output will still fall short of the country's estimated demand of 80,000 bundles a year.

Quality of indigenous product.

15. The question of quality of the indigenous product was discussed at length by the Board with the representatives of producers, importers and consumers. It was contended that the indigenous wire healds did not compare favourably with the imported article. It was stated that the workmanship was inferior and that the gauge of wire used was of uneven thickness and wanting in tested quality. The soldering and the finish were also stated to be far from satisfactory, the eyes in the centre of the wire healds and the loops at both ends being defective. Further, it was reported that the indigenous product got easily split at the twisted eye. It was said that the packing was also not satisfactory inasmuch as the eyes did not run at a fixed uniform angle ; this caused considerable difficulty for the consumer while setting the healds on the loom. Moreover, the healds were not properly marked to facilitate their use on the looms ; this led to an uneven assembling of the healds in the frame. Nevertheless, the consensus of opinion seemed to be that the indigenous article had shown steady improvement in quality during the last few years. The manufacturers also assured the Board that they were endeavouring to rectify the present defects and expected to put into the market next year wire healds which would be as good as the imported article. We have reason to believe that most of the existing defects in the indigenous healds are mainly due to the use of old machinery and lack of suitable technical guidance at the factory. We have already recommended that facilities should be given to manufacturers of wire healds to import up-to-date machinery ; we also recommend that they should be assisted in obtaining the required technical personnel from abroad.

Board's estimate of cost of production and fair selling price.

16. (a) As stated earlier, the cost of production of wire healds manufactured by C. J. Textile Accessories was investigated by the Cost Accounts Officer attached to the Board. The firm is a private registered partnership with three equal partners and it came into existence in 1940 for the manufacture of wire healds, reeds and other allied textile accessories. The accounts of this firm are maintained in Gujerati and are closed each year on the Divali Day. No auditors are

employed to certify the accounts ; nor is there a costing system in use. Production records, as maintained, are very inadequate, while no store records, giving details of items and quantities of stores purchased and issued are kept. There are also no records to show the quantities produced. In the circumstances, the Board built up its estimate of cost of production of wire healds on such data as were available with the help of explanations given by the management.

(b) The costing relates to the first half-year ended 30th June 1947. The firm manufactures wire healds of two sizes, *viz.*, 9½ inches and 10¼ inches. The cost of production of 9½ inch healds has been worked out in detail, while that of 10¼ inch healds has been found out by adding, to the cost of 9½ inch healds, only the cost of additional materials required for that size.

(c) The firm is almost exclusively engaged in the manufacture of wire healds and reeds. All direct expenses have been allocated as far as practicable to each department while the overheads have been distributed in the ratio of direct wages of each department. On this basis, the percentage of expenditure relating to Healds Department comes to 49 per cent.

(d) In estimating the cost of production in 1948 and in 1949-50, certain adjustments have been made : (i) cost of steel wire has been taken at Rs. 1-4-4 per lb., as against Re. 0-15-5 in 1947 on account of increase in the price ; (ii) wastage on raw materials has been allowed at 10 per cent. ; (iii) an increase of 10 per cent. in wages has been provided for ; (iv) in spite of the expected increase in production, the establishment charges have been kept at the 1947 level ; (v) on the basis of bonus payments made in the past, bonus to workers and staff (excluding the partners) has been allowed at 8 per cent. of the total wages and salaries bill ; (vi) an increase of 10 per cent. in all other overheads has been provided for to cover the cost of additional output ; (vii) a total allowance of Re. 1,500 per month for the two partners has been provided for as their reasonable remuneration for looking after the day-to-day affairs of the firm, and of this, 49 per cent. has been allocated to wire healds.

(e) Depreciation has been allowed at income tax rates on the written-down value of the block.

(f) The working capital has been taken at 3 months' cost of production and interest thereon has been allowed at 4 per cent. per annum.

(g) The block capital relating to the wire healds department has been taken at Rs. 65,105 and the return thereon at 10 per cent. per annum has been allowed.

(h) The Board's estimate of the cost of production and fair selling price of wire healds in 1947, 1948 and in 1949-1950 is as follows :

WIRE HEALDS INDUSTRY

C. J. Textile Accessories Works, Vile Parle

Cost of Production and Fair Selling Price per bundle of 1000 Wire healds 27G 9½" during the half year ended 30th June 1947.

Total Production = 3,600 Bundles of 1,000 each = 3,600,000 nos.

Details.	Rate per lb.	Quantity.	Amount.
	Rs. A. P.	Lbs.	Rs. A. P.
1. *Raw Materials.*			
Steel wire 28 SWG.	0 15 5	1·25	1 3 3
Tin	2 13 3	1·13	3 3 2
Hydrochloric acid	0 3 0	0·32	0 1 0
Zinc	0 4 9	0·09	0 0 5
Total Material Cost			4 7 10
2. *Power & Fuel.*			
(a) Electricity			0 2 4
(b) Coal			0 0 6
(c) Aviation Spirit			0 1 11
(d) Furnace oil			0 0 9
3. Labour			1 12 2
4. Repairs & Maintenance			0 7 0
5. Consumable Stores			0 7 2
6. *Establishment.*			
(a) Salaries of officers			0 5 3
(b) Other Establishment			0 15 8
7. Depreciation			0 8 9
8. Other overheads			0 10 0
9. Packing charges			0 3 6
10. Selling expenses			
11. Interest on Working Capital			0 1 8
12. Total Cost of Production			10 4 6
13. Return on Fixed Capital			1 12 11
14. Fair Selling Price			12 1 5
Fair Selling Price of Wire healds 27G—10½"			12 3 9

Estimated cost of production and fair selling price per bundle of 1000 wire healds, 27G-9½" for the year 1948

(Expected total production 25,805 bundles = 25,805,000 pieces)

Details.	Rate per unit.	Quantity.	Value.
	Rs. A. P.	Lbs.	Rs. A. P.
1. *Raw Materials.*			
Steel Wire 28 SWG.	1 4 4	1·22	1 8 10
Tin	2 13 3	1·10	3 1 9
Hydrochloric acid	0 3 0	0·32	0 1 0
Zinc	0 4 9	0·09	0 0 5
Total cost of materials ..	..	..	4 12 0
2. *Power & Fuel.*			
Electricity	..	..	0 0 10
Coal	..	..	0 0 2
Aviation Spirit	..	..	0 0 9
Furnace Oil	..	..	0 0 4
3. Labour	..	..	0 8 8
4. Repairs & Maintenance	..	..	0 2 2
5. Consumable stores	..	..	0 2 2
6. *Establishment.*			
(*a*) Salaries of officers	..	..	0 6 11
(*b*) Other Establishment	..	..	0 4 5
7. Depreciation	..	..	0 2 4
8. Other Overheads	..	..	0 4 4
9. Packing charges	..	..	0 3 4
10. Selling Expenses	..	..	..
11. Interest on Working Capital	..	..	0 1 1
12. Total cost of production	..	..	7 1 6
13. Return on fixed capital	..	..	0 4 2
14. Fair Selling Price	..	..	7 5 8
Fair Selling Price of wire healds 27G—10¼" ..	..	..	7 8 7

Estimated cost of production and fair selling price per bundle of 1,000 wire healds, 27G-9½" for the year 1949-1950

(Expected total production 45,158 bundles = 45,158,000 pieces)

Details.	Rate per unit.	Quantity.	Value.
	Rs. A. P.	Lbs.	Rs. A. P.
1. *Raw Materials.*			
Steel Wire 28 SWG	1 4 4	1·17	1 7 9
Tin	2 13 3	1·05	2 15 6
Hydrochloric Acid	0 3 0	0·29	0 0 10
Zinc	0 4 9	0·08	0 0 5
Total cost of Materials			4 8 6
2. *Power and Fuel.*			
Electricity			0 1 0
Coal			0 0 3
Aviation Spirit			0 0 10
Furnace Oil			0 0 4
3. Labour			0 9 11
4. Repairs & Maintenance			0 1 10
5. Consumable Stores			0 2 3
6. *Establishment.*			
(*a*) Salaries of Officers			0 3 11
(*b*) Other Establishment			0 2 6
7. Depreciation			0 1 8
8. Other Overheads			0 2 11
9. Packing charges			0 3 4
10. Selling expenses			0 0 9
11. Interest on working Capital			0 1 0
12. Total cost of production			6 9 0
13. Return on fixed capital			0 2 5
14. Fair selling price			6 11 5
Fair selling price of wire healds 27G—10¼"			6 14 1

17. (1) Important raw materials, such as, steel wire and tin are imported. Tin is the biggest item in the cost of production at C. J. Textile Accessories Works due to their using a tinning furnace which necessarily results in rather heavy oxidation and consequent loss of tin. We were told that consumption of tin in this factory could be reduced by providing controlled atmosphere in the tinning bath.

Factors leading to higher cost of production in India.

(2) Labour cost is high due to labour being less efficient mechanically than in foreign countries. The machinery at C. J. Works, however, is both old and out-of-date and requires frequent repairs as well as overhauls. This naturally interrupts its production. As the parts of the existing machines are non-standardized and therefore non-interchangeable, each machine-part, big or small, requires individual attention in the maintenance. The management of C. J. Works, however, is trying to standardize the parts of the twisters. Attempts are also being made to effect certain modification in the existing plant, and some progress has already been made in these directions.

(3) Overheads are high on account of low production and should become lower as production expands.

18. ' Wire healds ' are not specified separately in the First Schedule to the Indian Tariff Act, XXXII of 1934, as in operation on 1st January 1948. ' Healds, heald cords, and heald knitting needles are grouped together under item 72(1). The relevant extract from the Indian Customs Tariff, 28th issue, is given below :—

Existing rate of import duty.

Item No.	Name of Article.	Nature of duty.	Standard	Preferential rate if the article is the produce or manufacture of.		
				The U. K.	A British Colony.	Burma.
72(1)	The following Textile Machinery and apparatus by whatever power operated, namely healds, heald cords and heald knitting needles.	Revenue "	10 per cent. *Ad Valorem*.	..	..	Free.

19. The following statement gives the latest available figures of landed cost, with its break-up into c.i.f. price, import duty, landing and clearing charges, of wire healds 9½ inch long 27 SWG per 1,000 pieces.

C.I.f. price and landed cost.

C. I. F. PRICES AND LANDED COSTS

Wire Healds (1,000 *pieces*) 9½" *Long 27SWG*

Serial No.	Source of information.	Country of origin.	Period.	Landed Cost.			
				C. I. F. Price.	Import duty 10%.	Landing & Clearing charges.	Total landed cost.
1	2	3	4	5	6	7	8
1	Collector of Customs, Bombay	U. K. ..	January 1948	9 5 4	0 14 11	0 2 3 (1½%)	10 6 6
2	Collector of Customs, Bombay	Italy ..	January 1948	9 9 9	0 15 5	0 2 4 ,,	10 11 6
3	Collector of Customs, Madras	U. K. ..	December 1947.	7 10 10	0 12 3	0, 1 10 ,,	8 8 11
4	Volkart Brothers, Bombay	U. K. ..	March 1947	7 0 3	0 11 2	0 0 7 ,,	7 12 0
*5	Swastik Textile Traders Co. Ltd., Ahmedabad	Italy ..	April 1947	10 0 3	1 0 0	0 2 5 ,,	11 2 8
6	Mehta Parikh and Co., Bombay	U. K. ..	August 1947	7 6 9	0 12 0	0 1 3 (1%)	8 4 0 to 8 6 0
7	British Mill Stores Co., Bombay	U. K. ..	September 1947.	8 3 0	0 13 0	0 3 0 (2½%)	9 3 0
8	Textile Traders, Bombay	U. K. ..	October 1947	7 6 0	0 12 0	0 1 9 (1½%)	8 3 9
9	Dadiba Ardeshir & Co., Bombay	U. K. ..	November 1947.	8 8 6	0 13 8	0 3 5 (2½%)	9 9 7

* 9½" to 13½" G 27 mm to 32 mm.

20. *Comparative statement of fair selling prices of Indian wire healds and lowest landed cost of imports* ($9\frac{1}{2}'' \times 27$ *SWG*) *per* 1,000 *pieces* :—

Comparison of landed cost and fair selling price.

	Rs. A. P.	Rs. A. P.
(*a*) Fair selling price	7 5 8 (1948)	6 11 5 (1949 & 1950).
(*b*) C.i.f. price	7 0 3	7 0 3
(*c*) Duty at 10 per cent.	0 11 2	0 11 2
(*d*) Landing and clearing charges	0 0 7	0 0 7
(*e*) Landed cost without duty	7 0 10	7 0 10
(*f*) Landed cost with duty	7 12 0	7 12 0
(*g*) Difference between fair selling price and landed cost without duty, *i.e.* (*a*—*e*)	0 4 10	0 4 10
(*h*) The above difference as percentage of c.i.f. price	4·3%	4·8%

From the figures given above it will be seen that the duty required to cover the difference between the fair selling price of the indigenous wire healds in 1948 and the landed cost of import without duty is 4.3 per cent. The present revenue duty of 10 per cent. *ad valorem* will continue at least up to 31st March 1949. This will amply cover the difference between the two prices. In 1949 and 1950, the fair selling price of the indigenous wire healds will be less than the present figures of the lowest landed cost of imports without duty and the industry should be able to face foreign competition even without the aid of the present revenue duty of 10 per cent. We, however, believe that the present revenue duty of 10 per cent. *ad valorem* will continue to be levied for at least 2 or 3 years more and this will serve as a cushion for the indigenous article to withstand the pressure in the event of a moderate fall in the c.i.f. prices in the near future. In the circumstances, we think that there is no need to grant protection to the industry.

Apprehension of future competition.

21. (1) In comparing the fair selling price with the landed cost of imports, we have taken the c.i.f. prices prevalent in the year 1947 and the early part of 1948. There was, however, a case where one lot of wire healds was imported in Calcutta in January 1948, from the United Kingdom at a duty-paid landed cost of Rs. 6-2-2. But this was found to be an isolated case and we do not consider it proper to base our conclusions on it. This is further supported by the fact that the manufacturers of wire healds have found no difficulty up to the present in disposing of their products in competition with the imported commodities.

(2) Our attention was also drawn to the possibility of Japanese wire healds being imported into the country at prices much lower than the present prices of imports. In this connection certain quotations were produced before us to show that an offer had actually been made by a

Japanese firm to supply wire healds at the rate of about Rs. 4-10-8 per bundle of thousand pieces. But no firm contract had so far been made with the Japanese exporters concerned and no Japanese wire healds had actually been imported at that price. Although we consider that there is a potential danger of Japanese wire healds entering the country at very low prices, we cannot say whether such a danger will actually arise in the near future. Such being the case, we cannot take this factor into consideration in determining the measure of protection, if any, to be granted to the indigenous industry. At the same time, we consider that the situation should be carefully watched. Should Japanese wire healds begin to enter this country in sizeable quantities and at prices so low as would prejudice the position of the indigenous manufacturers in our home market, the manufacturers may apply to Government to reconsider the case and, if necessary, to order a summary inquiry.

Summary of conclusions and recommendations.

22. Our conclusions and recommendations are summed up as under :—

(i) The two important items of raw materials required for the industry, *viz.*, steel wires of 28 and 32 gauges and tin, are at present imported from abroad. Steel wires of the requisite gauges are, however, likely to be produced in the country by the end of 1948. (Paragraph No. 9)

(ii) The estimated annual demand of wire healds in India during the next three years in 80,000 bundles of 1,000 pieces each. (Paragraph No. 12).

(iii) The maximum production so far achieved was only 6,819 bundles in 1947. The estimated production for 1948 and 1949 is 25,805 and 45,158 bundles respectively. (Paragraph No. 14).

(iv) The quality of the indigenous product has improved in recent years, but there is still room for further improvement. We recommend that facilities should be given to the manufacturers of wire healds to import up-to-date machinery and get technical personnel from abroad. (Paragraph No. 15).

(v) The Board's estimate of fair selling price of 1,000 wire healds, 27 SWG—9½", is Rs. 7-5-8 for 1948 and Rs. 6-11-5 for 1949 and 1950. (Paragraph No. 16).

(vi) A comparison of the estimated fair selling price of the indigenous articles with the landed cost over imports without duty shows that the industry needs no protection at present. (Paragraph No. 20).

(vii) The industry is apprehensive of serious competition from imports of low priced wire healds in future. Should such competition arise and jeopardise the position of the industry, it may approach Government for ordering a summary inquiry. Paragraph No. 21).

Acknowledgments.

23. The Board wishes to express its thanks to Mr. J. Singh, Deputy Director General, in the Minisrty of Industry and Supply, Mr. D. E. Cooper, Additional Director in the Office of the Textile Commissioner, for their valuable assistance and to Mr. M. Ahmadullah, Secretary, Dr. Rama Varma, Assistant Secretary, Mr. R. N. Kapur, Board's Technical Adviser, Mr. R. Sundaram, Cost Accounts Officer, and the Board's Office for their work at all stages of the inquiry.

G. L. MEHTA

.....PRESIDENT.

H. L. DEY

.....MEMBER

B. V. NARAYANASWAMY NAIDU

.....MEMBER

M. AHMADULLAH

.....SECRETARY.

Bombay,

Dated the 9th April 1948.

APPENDIX I.

(Vide Para 3).

List of Associations and Persons to whom the questionnaires were issued and from whom replies or Memoranda were received.

In addition to all the Directors of Industries with the Provincial Governments and Chambers of Commerce and Associations, relevant questionnaires were sent to the following producers, importers and consumers of wire healds.

*Denotes those who have answered the questionnaire.

†Denotes those who are not interested.

PRODUCERS :

*1. C. J. Textile Accessories Works, Nehru Road, Vile Parle, Bombay 24.

IMPORTERS :

1. Abdus Samad Abdul Huq, Butcher Mahal, Allahabad.
2. Associated Textile Engineers, 43, Forbes Street, Fort, Bombay.
3. Burma Oil Co. (India Trading) Ltd., Post Office Box No. 2039, Victoria House, Chowringhee Square, Calcutta.
*4. British Mill Stores Co., Sir Vithaldas Chambers, Bruce Street, Fort, Bombay.
*5. B. N. Mody and Co., 14|24, Civil Lines, Post Box 24, Cawnpore.
6. Chhoteylal Sanwal Dass, Bazar Sirkiwalan, Delhi.
*7. Dadiba Ardeshir and Co., 13-A, Bruce Street, Fort, Bombay.
8. Excelsior Mill Supply Co., 45-46 Ali Chambers, Medows St., Fort, Bombay.
†9. Edgar Handley and Co., Seksaria Chambers, 139 Medows St., Fort, Bombay.
*10. Furdonjee Dinsha and Co. (Now Textile Traders), 41, Bruce Street, Bombay.
11. Guest Keen Williams Limited, Bhandup, Bombay.
†12. Greaves Cotton & Co., Ltd., 1, Forbes Street (P. O. Box No. 91), Bombay.
13. Gannon Dunkerley and Co., Ltd., Chartered Bank Building, Esplanade Road, Bombay.
†14. Imperial Trading Co., Ali Chambers, Tamarind Lane, Fort, Bombay.
†15. Indo British Trading Bureau, 7|10 Elphinstone Circle, Fort, Bombay.
16. Industrial & Agricultural Engineering Co., 43, Forbes St., Bombay.
17. Jones Textilaties Export Co. Ltd., Jeroo Building, 137, Mahatma Gandhi Road, Bombay.
18. J. Braceweil Limited, 673, Haribhai Market Cross Lane, Railwaypura, Ahmedabad.
19. Mohammad Rafiq Mohammad Hanif, Meston Road, Cawnpore.
*20. Mehta Parekh and Co., 45-47 Apollo St., Fort, Bombay.
21. Mill Stores Trading Co., India Ltd., Mehta House, 79—91 Apollo St., Fort, Bombay.
†22. Mayashankar Thacker and Co., 65, Apollo St., Fort, Bombay.
23. H. M. Mehta and Company, Mehta House, 91 Apollo St., Fort, Bombay.
†24. Nagindas Kilabhai and Co., Lalgir Chambers, Fort, Bombay.
25. Ormerods (India) Ltd., Bank of Baroda Building, Apollo Street, Fort, Bombay.
26. P. Kothare and Sons, 2nd Kumbharwada, Bombay.
†27. P. R. Wallace and Sons Ltd., Elphinstone Building, 10 Churchgate St., Bombay.
*28. Star Trading Co., Apollo St., Fort, Bombay.

*29. Swastik Textile Trading Co., Ltd., Motilal Hirabhai Market, Railwaypura Post, Ahmedabad 2.
30. Sethna Katrak and Co., 30, Tamarind Lane, Fort, Bombay.
31. Shantilal Sheth and Co., Raja Bahadur Bansilal Motilal Mansion, 13-A, Bruce St., Fort, Bombay.
32. Textile Mfrs., Association, Pul Bangash, Delhi.
*33. Textile Machinery and Accessories Industrial Export Group, Manchester.
*34. Volkart Brothers, Graham Road, Ballard Estate, P. O. Box No. 199, Bombay.
35. W. H. Brady and Co., Ltd., Royal Insurance Building, Churchgate St., Bombay.

CONSUMERS :

1. Abdus Samad, Abdul Huq, Butcher Mahal, Allahabad.
2. Ahmedabad Mfg. & Calico Printing Co. Ltd., C|o M|s. Karamchand Premchand & Co., Outside Jamalpur Gate, Ahmedabad.
*3. Ahmedabad Mill Owners' Association, Lal Darwaja, P. O. Box 7, Ahmedabad.
*4. Buckingham & Carnatic Co. Ltd., P. Box No. 66, Madras.
5. Bombay Dyeing and Mfg. Co. Ltd., Neville House, Ballard Estate, Bombay.
*6. Calico Mills Limited, Ahmedabad.
7. Chotelal Sanwaldass, Bazar Sirkiwalan, Delhi.
*8. Delhi Cloth and General Mills Co. Ltd., Delhi.
*9. Elphinstone Spinning & Wvg. Co. Ltd., United India Bldg., Sir P. M. Road, Bombay.
*10. Finlay Mills Limited, Govt. Gate Road, Parel, Bombay.
11. India United Mills Ltd., Dougall Road, Ballard Estate, Bombay.
*12. Indian Mfg. Co. Ltd., Sir Vithaldas Chambers, Apollo St., Fort, Bombay.
*13. J. K. Cotton Spg. & Wvg. Mills Co. Ltd., Kamala Tower, Cawnpore.
*14. Khatau Makanji Spg. & Wvg. Co. Ltd., Laxmi Building, Ballard Estate, Bombay.
15. Kohinoor Mills Co. Ltd., C|o M|s. Killick Nixon and Co., Home St., Fort, Bombay.
*16. Khandeish Spg. & Wvg. Co. Ltd., Cambala Building, 42, Queens Road, Fort, Bombay.
17. Lyallpur Cotton Mills Limited, Lyallpur, W. Punjab.
*18. Lakshmirathan Cotton Mills Co. Ltd., Behari Niwas, Cawnpore.
19. Mohd. Rafiq Mohd. Hanif, Meston Road, Cawnpore.
20. Morarji Gokuldas Spg. & Wvg. Co. Ltd., Supari Baug Road, Parel, Bombay.
*21. Millowners Association, Churchgate Street, Bombay.
22. New Victoria Mills Co. Ltd., Cawnpore.
*23. Savadi Thangavelu Mudaliar, Ekambara Kuppam, P. O. Nagari, Dist. Chittoor.
*24. Shree Niwas Cotton Mills Ltd., Delisle Road, Post Box No. 13, Bombay.
25. S. M. A. Somasundara Mudaliar, Ekambara Kuppam, P. O. Nagari, Dist., Chittoor.
26. Gopaldass Jagat Ram, Talab Bazar, Ludhiana.
27. Didwania Bros., Ltd., Kashmir Gate, Delhi.

SUPPLIERS OF RAW MATERIALS :

*Indian Steel & Wire Products Ltd., Indranagar P.O., Tatanagar.

APPENDIX II.

(Vide Para 3).

List of persons who were invited for giving evidence at the public enquiry.

PRODUCER :

C. J. Textile Accessories Works, Nehru Rd., VILE PARLE, BOMBAY 21.

IMPORTERS :

1. Abdus Samad Abdul Huq, Butcher Mahal, Allahabad.
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4. British Mill Stores Co., Sir Vithaldas Chambers, Bruce Street, Fort, Bombay.
5. B. N. Mody & Company, Civil Lines, Cawnpore.
6. Chhoteylal Sanwal Dass, Bazar Sirkiwalan, Delhi.
7. Dadiba Ardeshir & Company, 13-A, Bruce Street, Fort, Bombay.
8. Excelsior Mill Supply Co., 45-46 Ali Chambers, Meadows Street, Fort, Bombay.
9. Furdonjee Dinsha & Co. (Now Textile Traders), 41 Bruce Street, Bombay.
10. Guest Keen Williams Limited, Bhandup Works, Bombay.
11. Gannon Dunkerley & Co. Ltd., Chartered Bank Building, Esplanade Road, Bombay.
12. Industrial and Agricultural Engineering Company, 43 Forbes Street, Bombay.
13. Jones Textilaties Export Company - Limited, Jeroo Building, 137, Mahatma Gandhi Road, Bombay.
14. J. Bracewell, 673 Haribhai Market Cross Lane, Railwaypura, Ahmedabad.
15. Mohammad Rafiq Mohammad Hanif, Meston Road, Cawnpore.
16. Mehta Parekh & Company, 45—47, Apollo Street, Fort, Bombay.
17. Mill Stores Trading Co. (India) Ltd., Mehta House, 79—91, Apollo Street, Fort, Bombay.
18. H. M. Mehta & Company, Mehta House, 91 Apollo St., Fort, Bombay.
19. Ormerods (India) Ltd., Bank of Baroda Building, Apollo Street, Fort, Bombay.
20. P. Kothare & Sons, 2nd Kumbharwara, Bombay.
21. S. Star Trading Co., 16 Apollo Street, Fort, Bombay.
22. Swastik Textile Trading Co. Ltd., Motilal Hirabhai Market, Railwaypura Post, Ahmedabad 2.
23. Sethna Katrak & Co., 30 Tamarind Lane, Fort, Bombay.
24. Shantilal Sheth & Co., Raja Bahadur Bansilal Motilal Mansion, 13-A, Bruce Street, Fort, Bombay.
25. Textile Manufacturers Association, Pul Bangash, Delhi.
26. Volkart Brothers, Graham Road, Ballard Estate, P. O. Box No. 199, Bombay.
27. W. H. Brady & Co. Ltd., Royal Insurance Bldg., Churchgate Street, Bombay.

CONSUMERS :

1. Ahmedabad Mfg. & Calico Printing Co. Ltd., C|o. M|s. Karamchand Premchand & Co., Outside Jamalpur Gate, Ahmedabad.
2. Ahmedabad Mill Owners' Association, Laldarwaja, P. O. Box 7, Ahmedabad.
3. Buckingham & Carnatic Co. Ltd., P. Box No. 66, Madras.
4. Bombay Dyeing & Mfg. Co. Ltd., Neville House, Ballard Estate, Bombay.
5. Calico Mills Limited, Ahmedabad.
6. Chhoteylal Sanwaldass, Bazar Sirkiwalan, Delhi.
7. Delhi Cloth & General Mills Co. Limited, Delhi.
8. Elphinstone Spg., Wvg. & Mfg. Co. Ltd., United India Building, Sir Pherozshah Mehta Road, Bombay.
9. Finlay Mills Limited, Govt. Gate Road, Parel, Bombay.
10. India United Mills Ltd., Dougall Road, Ballard Estate, Bombay.
11. Indian Manufacturing Co. Ltd., Sir Vithaldas Chambers, Apollo Street, Fort, Bombay.
12. J. K. Cotton Spg. & Wvg. Mills Co. Ltd., Kamla Tower, Cawnpore.
13. Khatau Makanji Spg. & Wvg. Co. Ltd., Laxmi Building, Ballard Estate, Bombay.
14. Kohinoor Mills Co., Ltd., C|o. M|s. Killick Nixon & Company, Home Street, Fort, Bombay.
15. Khandeish Spg. & Wvg. Co., Ltd., Cambala Building, 42 Queen's Road, Fort, Bombay.
16. Lakshmiratan Cotton Mills Co. Ltd., Cawnpore.
17. Morarji Gokuldas Spg. & Wvg. Co. Ltd., Supari Baug Road, Parel, Bombay.
18. Millowners' Association, Patel House, Churchgate St., Bombay.
19. New Victoria Mills Co. Ltd., Cawnpore.
20. Savadi Thangavelu Mudaliar, Ekambara Kuppam, P. O. Nagari, District Chittoor.
21. Shree Niwas Cotton Mills Limited, Bombay.
22. S. M. A. Somasundara Mudaliar, Ekambara Kuppam, P. O. Nagari, District Chittoor.
23. Gopaldas Jagat Ram, Talab Bazar, Ludhiana.
24. Didwania Brothers Limited, Kashmiri Gate, Delhi.

SUPPLIERS OF RAW MATERIALS :

Indian Steel & Wire Products, Limited, Tatanagar, Bihar.

APPENDIX III.
(Vide Para 3).

List of persons who attended the inquiry.

PRODUCERS :

1. C. J. Textile Accessories Works, Bombay—represented by
   1. Mr. V. G. Jani,
   2. Mr. C. J. Jani,
   3. Mr. M. L. Makaria.
2. Association of Merchants & Manufacturers of Textile Stores and Accessories, Bombay—represented by
   1. Mr. S. H. Bhagwati,
   2. Mr. R. S. Desai.

IMPORTERS :

1. British Mills Stores, Bombay—represented by
   Mr. B. H. Gotla.
2. Textile Traders, Bombay—represented by
   Mr. M. F. Sethna.
3. Jones Textilaties Export Company Ltd., Bombay—represented by
   Mr. H. E. Stott.
4. Ormerods (India) Limited, Bombay—represented by
   Mr. A. Barucha.

CONSUMERS :

1. Sri Niwas Cotton Mills Limited, Bombay—represented by
   Mr. S. R. Sabnis.
2. Millowners' Association, Bombay—represented by
   Mr. N. S. V. Aiyar.
3. Engineering Association of India, Calcutta—represented by
   Mr. DeMello.
4. M|s. Savadi Thangavelu Mudaliar, Chittoor (Madras)—represented by
   Mr. V. M. Krishnaiah.
5. India United Mills Limited, Bombay—represented by
   Mr. A. Haworth.

OFFICIALS :

1. Textile Commissioner, Bombay—represented by
   Mr. Cooper.
2. D.G.I. & S.—represented by
   Mr. Jangbir Singh.

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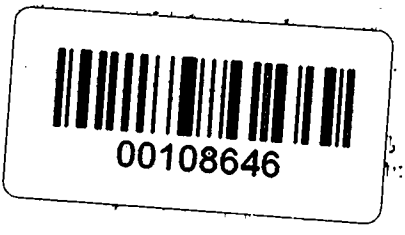
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